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January 29, 2002

BY HAND

Lori Parnass
Department of Toxic Substances Control
1011 N. Grandview Avenue
Glendale, CA 91201

Re: 5030 Firestone Blvd. and 9301 Rayo Ave., South Gate, CA (the "Property")

Dear Ms. Parnass:

As requested in the letter dated January 15, 2002 to me from Rita Kamat of DTSC, we are providing you with copies of the following:

- Los Angeles Regional Water Control Board *Soil Closure / No Further Action Letter* for the Property, dated January 23, 2002;
- IT Corporation, *Soil Closure Report*, dated October 3, 2001;
- Dragun Corporation and IT Corporation, *Groundwater and Soil Evaluation, 5030 Firestone Boulevard and 9301 Rayo Avenue, South Gate, California*, dated May 22, 2001.

These documents provide information responsive to Ms. Kamat's letter. In addition, we offer to provide you access to dozens of other environmental submissions regarding the Property which are in our possession. These include:

- IT Corporation *Soil Removal Report*, dated December 17, 2001,
- IT Corporation *Submittal of Soil Analytical Data Spreadsheets*, dated December 22, 2001;
- IT Corporation *Work Plan for Soil Closure, Jervis B. Webb, 5030 Firestone Boulevard and 9301 Rayo Avenue, South Gate, California*, dated June 25, 2001;
- IT Corporation, *Addendum to Work Plan for Soil Closure*, dated July 18, 2001.

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- Erler and Kalinowski, Inc., *Phase I Environmental Site Assessment of the Jervis B. Webb Company Properties at 9301 Rayo Avenue and 5030 Firestone Boulevard, South Gate, California*, dated June 20, 1996;
- Erler and Kalinowski, Inc., *Phase II Soil Investigation Report for Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated February 18, 1998;
- Erler and Kalinowski, Inc., *Phase II Groundwater Investigation Report, Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated June 30, 1998;
- Erler and Kalinowski, Inc., *Transmittal of Results of Additional Groundwater Investigation and Proposed Well Installation*, dated October 21, 1998;
- Erler and Kalinowski, Inc., *Proposed Tasks, Schedule and Work Plan for Additional Groundwater Investigation and Quarterly Groundwater Monitoring*, dated September 29, 1998.
- Erler and Kalinowski, Inc., *Additional Groundwater Investigation and Quarterly Groundwater Monitoring Report for October to December 1998, Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated January 13, 1999;
- Erler and Kalinowski, Inc., *Work Plan for Clarifier and Removal and Soil Remediation by Soil Vapor Extraction at the Jervis B. Webb Company Property located at 5030 Firestone Boulevard, South Gate, California*, dated April 14, 1999;
- Erler and Kalinowski, Inc., *Quarterly Progress Report for January through March 1999 for the Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated June 4, 1999;
- Erler and Kalinowski, Inc., *Quarterly Progress Report for April through June 1999 for the Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated July 30, 1999;
- Erler and Kalinowski, Inc., *Quarterly Progress Report for July to September 1999 for the Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated October 13, 1999;
- Erler and Kalinowski, Inc., *Quarterly Progress Report for October to December 1999 for the Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated February 4, 2000;

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- Erler and Kalinowski, Inc., *Quarterly Progress Report for January through March 2000 for the Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated April 27, 2000;
- Erler and Kalinowski, Inc., *Quarterly Progress Report for April through June 2000 for the Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated August 16, 2000;
- Erler and Kalinowski, Inc., *Quarterly Progress Report for July through September 2000 for the Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated October 26, 2000;
- Erler and Kalinowski, Inc., *Report on Site Conditions, Local Hydrogeology and Offsite Groundwater Production and Work Plan for Groundwater Remediation, Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California*, dated November 30, 2000;
- Erler and Kalinowski, Inc., *Quarterly Progress Report for October through December 2000 for the Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated February 5, 2001;
- Erler and Kalinowski, Inc., *Quarterly Progress Report for April through June 2001 for the Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, dated July 24, 2001.

Please contact me if you would like to conduct any further review and we can schedule a convenient time and date for you to visit our offices. My direct dial number is 213-891-7895.

Yours very truly,



Michael Scott Feeley
of LATHAM & WATKINS

cc: Michael J. Farley

Table 3. Summary of TCE and PCE Concentrations in Soil
5030 Firestone Boulevard
South Gate, California
Project #21025-02

Sample Number Depth (feet)	B1-5.5 5.5 mg/kg	B1-11 11 mg/kg	B1-20 20 mg/kg	B2-5.5 5.5 mg/kg	B2-10.5 10.5 mg/kg	B3-6 6 mg/kg	B3-11 11 mg/kg	B4-6 6 mg/kg	B4-16 16 mg/kg	B4-20.5 20.5 mg/kg	B5-6 6 mg/kg	B5-10.5 10.5 mg/kg	B6-6 6 mg/kg	B6-10.5 10.5 mg/kg	B7-6 6 mg/kg	B7-11 11 mg/kg	B8-6 6 mg/kg	B8-11 11 mg/kg	B9-5.5 5.5 mg/kg	B9-10.5 10.5 mg/kg	B10-6 6 mg/kg	B10-11 11 mg/kg	B11-6 6 mg/kg
PCE - tetrachloroethane	0.074	0.13	0.035	0.018	0.045	0.042	0.12	0.076	2.2	140	0.025	0.065	0.13	0.019	0.055	< 0.015	0.0029	0.041	0.0036	0.022	0.027	< 0.015	0.061
TCE - trichloroethene	0.024	0.037	0.04	0.0073	< 0.015	0.01	0.034	0.021	0.092	270	0.0053	0.19	0.031	0.025	0.019	< 0.015	< 0.0025	0.05	< 0.0025	0.041	0.0064	0.036	0.016
TCE/PCE	0.32	0.28	1.14	0.41	0.33	0.24	0.28	0.28	0.04	1.93	0.21	2.92	0.24	1.32	0.35	1	0.86	1.22	0.69	1.86	0.24	2.4	0.26

Sample Number Depth (feet)	B11-11 11 mg/kg	B12-6 6 mg/kg	B13-6 6 mg/kg	B15-10 10 mg/kg	B15-16 16 mg/kg	B15-20.5 20.5 mg/kg	B15-26.5 26.5 mg/kg	B15-31 31 mg/kg	B15-35.5 35.5 mg/kg	B15-40 40 mg/kg	B16-6 6 mg/kg	B16-11 11 mg/kg	B16-16 16 mg/kg	B16-21 21 mg/kg	B16-26 26 mg/kg	B16-31 31 mg/kg	B16-35.5 35.5 mg/kg	B16-41 41 mg/kg	B16-46 46 mg/kg	B16-51 51 mg/kg	B17-6 6 mg/kg	B17-11 11 mg/kg	B17-16 16 mg/kg
PCE - tetrachloroethane	< 0.014	< 0.0025	< 0.0025	< 0.005	< 0.005	< 0.005	0.054	0.041	0.026	< 0.005	< 0.005	< 0.005	0.027	0.041	0.047	0.027	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
TCE - trichloroethene	0.035	< 0.0025	< 0.0025	< 0.005	< 0.005	< 0.005	0.38	0.52	0.14	1.2	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.41	0.39	1.3	< 0.005	< 0.005	< 0.005
TCE/PCE	2.5	1	1	1	1	1	7.04	12.68	5.38	240	1	1	0.19	0.12	0.11	0.19	1	82	78	260	1	1	1

Sample Number Depth (feet)	B17-21 21 mg/kg	B17-26 26 mg/kg	B17-31.5 31.5 mg/kg	B17-36 36 mg/kg	B17-41 41 mg/kg	B17-46 46 mg/kg	B17-53.5 53.5 mg/kg	B18-11 11 mg/kg	B18-16 16 mg/kg	B18-21 21 mg/kg	B18-27 27 mg/kg	B18-31 31 mg/kg	B18-36 36 mg/kg	B18-41 41 mg/kg	B18-46 46 mg/kg	B19-16 16 mg/kg	B19-21 21 mg/kg	B19-26 26 mg/kg	B19-31 31 mg/kg	B19-36.5 36.5 mg/kg	B19-41 41 mg/kg	B19-46 46 mg/kg
PCE - tetrachloroethane	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.4	0.37	0.66	0.093	0.14	< 0.005	0.091	0.18	0.42	0.28	0.28	0.25	< 0.005	0.16	0.18
TCE - trichloroethene	< 0.005	0.048	0.056	1.4	1.2	1.6	1.4	0.11	0.61	16	0.75	2	0.056	2.3	8.7	0.2	1.8	1.5	1.2	0.11	4	4.3
TCE/PCE	1	9.6	11.2	280	240	320	280	0.28	1.65	24.24	8.06	14.29	11.2	25.27	48.33	0.48	6.43	5.36	4.8	22	25	23.89

Sample Number Depth (feet)	MW1-10.5 10.5 mg/kg	MW1-20.5 20.5 mg/kg	MW1-30.5 30.5 mg/kg	MW2-10.5 10.5 mg/kg	MW2-20.5 20.5 mg/kg	MW2-30.5 30.5 mg/kg	MW3-11 11 mg/kg	MW3-20.5 20.5 mg/kg	MW3-30.5 30.5 mg/kg	MW5-21 21 mg/kg	MW5-31 31 mg/kg	MW5-41 41 mg/kg
PCE - tetrachloroethane	0.021	0.023	0.011	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.050
TCE - trichloroethene	0.018	0.062	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.022	0.011	0.55
TCE/PCE	0.86	2.7	5.45	1	1	1	1	1	1	8.8	4.4	11

- NOTES: 1) Analyses performed by Orange Coast Analytical using EPA methods 8240 and 8010.
2) Samples from borings B1 through B13 collected on October 28, 1997. Samples from borings B15 through B19 collected December 1 and 2, 1997 (EKI, 1998a).
3) Samples from MW-1 through MW-3 collected in June 1998 (EKI, 1998b).
4) Samples from MW-5 collected in January 1999 (EKI, 1999a).
5) Data summarized from Eriar & Kalinowski reports (EKI, 1998a, 1998b, 1999a).

Quarterly gw rpts
through 7/01.
Erler &
Kalinowski, Inc.

Additional Groundwater Investigation and Quarterly Monitoring Report for October to December 1998

Jervis B. Webb Company Property
5030 Firestone Boulevard
South Gate, California

13 January 1999

**Erler &
Kalinowski, Inc.**

Consulting Engineers and Scientists
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002987

TABLE 1

Well Construction Details

Additional Groundwater Investigation and
Quarterly Monitoring Report for October to December 1998
 Jervis B. Webb Company, 5030 Firestone Boulevard, South Gate, California

Well ID	Installation Date	Boring Depth (ft bgs)	Boring Diameter (inches)	Casing Diameter (inches)	Perforated Interval (ft bgs)	Casing Material	Screen Material	Perforation Size (inches)	Filter Pack Material	Surface Completion
MW-1	2/25/98	73	10-1/4	4	40 - 70	PVC	PVC	0.010	#1C Lonestar	12" EMCO
MW-2	2/25/98	73	10-1/4	4	40 - 70	PVC	PVC	0.010	#1C Lonestar	12" EMCO
MW-3	2/25/98	73	10-1/4	4	40 - 70	PVC	PVC	0.010	#1C Lonestar	12" EMCO
MW-4	10/28/98	71	10-1/4	4	40 - 70	PVC	PVC	0.010	#1C Lonestar	12" EMCO
MW-5	10/28/98	71	10-1/4	4	40 - 70	PVC	PVC	0.010	#1C Lonestar	12" EMCO

NOTES: Abbreviations: ft bgs = feet beneath the ground surface
 PVC = polyvinyl chloride

TABLE 5
Analytical Results for Monitoring Well Groundwater Samples
 Additional Groundwater Investigation and Quarterly Monitoring Report for October to December 1998
 Jervis B. Webb Company, 5030 Firestone Boulevard, South Gate, California

Well ID	Sample Number	Sample Date	Analyte Concentration										TDS (mg/L)
			Benzene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,1-DCA (ug/L)	1,2-DCA (ug/L)	1,1-DCE (ug/L)	c-1,2-DCE (ug/L)	t-1,2-DCE (ug/L)	PCE (ug/L)	TCE (ug/L)	
MW-1	MW-1-0304	3/4/98	<0.5	<0.5	<0.5	<0.5	<0.5	220	130	<0.5	140	24,000	--
	MW-1-0304DUP	3/4/98	<0.5	<0.5	<0.5	<0.5	<0.5	210	150	<0.5	160	25,000	--
	MW-1-0520	5/20/98	<125	<125	<125	<125	<125	160	130	<125	<125	24,000	1,500
	MW-1	11/5/98	<125	<125	<125	<125	<125	140	160	<125	170	28,000	--
MW-2	MW-2-0304	3/4/98	<0.5	<0.5	<0.5	13	<0.5	34	65	<0.5	<0.5	2,700	--
	MW-2-0520	5/20/98	<10	<10	<10	14	<0.5	38	68	<10	<10	3,000	2,500
	MW-2	11/5/98	<10	<10	<10	13	<10	36	68	<10	<10	3,200	2,600
MW-3	MW-3-0304	3/4/98	<0.5	13	<0.5	14	<0.5	82	200	<0.5	<0.5	2,800	--
	MW-3-0520	5/20/98	<10	<10	<10	13	<0.5	58	230	15	<10	2,800	1,100
	MW-3	11/5/98	<10	<10	<10	11	<10	66	240	18	<10	2,300	--
MW-4	MW-4	11/5/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	<0.5	6.7	3,600
MW-5	MW-5	11/5/98	<25	<25	<25	<25	<25	42	380	30	<25	5,000	--
	MW-5-DUP	11/5/98	<25	<25	<25	<25	<25	40	360	29	<25	4,800	--
California MCL			1	150	1750	5	0.5	6	6	10	5	5	

NOTES: Abbreviations:

xylenes = total xylene isomers	PCE = tetrachloroethene
1,1-DCA = 1,1-dichloroethane	TCE = trichloroethene
1,1-DCE = 1,1-dichloroethene	1,1,1-TCA = 1,1,1-trichloroethane
1,2-DCA = 1,2-dichloroethane	TDS = total dissolved solids
c-1,2-DCE = cis-1,2-dichloroethene	ug/L = micrograms per liter
t-1,2-DCE = trans-1,2-dichloroethene	mg/L = milligrams per liter
VOCs = volatile organic compounds	-- indicates not analyzed

- Analyses performed by Orange Coast Analytical, Inc. using EPA Method 8260 for VOCs and EPA Method 160.1 for TDS.
- California maximum contaminant levels ("MCLs") are as reported in the Drinking Water Standards and Health Advisories Table by U.S. EPA Region IX, dated June 1998.

TABLE 4

Analytical Results for Direct-Push Groundwater Samples

Additional Groundwater Investigation and Quarterly Monitoring Report for October to December 1998

Jervis B. Webb Company, 5030 Firestone Boulevard, South Gate, California

PIPP Location	Sample Date	Depth (ft bgs)	Volatile Organic Compounds - EPA Method 8260 (ug/L)											
			Acetone	MEK	Benzene	Toluene	Xylenes	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE
CPT-1	10/1/98	55	170	4.6	1.6	<0.5	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CPT-1	10/1/98	95	8.1	<1	<0.5	<0.5	<0.5	<0.5	5.3	<0.5	<0.5	<0.5	<0.5	<0.5
CPT-2	10/1/98	55	300	3.5	<1	1.1	<1	<1	<1	<1	<1	<1	<1	1.6
CPT-3	10/1/98	55	170	2.7	0.58	0.55	0.66	<0.5	<0.5	<0.5	2.6	<0.5	<0.5	6.3
CPT-4A	10/1/98	55	95	2.2	<1	1.1	1.2	1.2	<1	4.1	11	<1	<1	220
CPT-4B	10/1/98	55	80	8.4	<1	<1	<1	1.1	<1	3.4	10	<1	<1	200
CPT-5	10/1/98	55	480	<25	<13	<13	<13	<13	<13	<13	110	<13	<13	3,800
CPT-6	10/2/98	55	<400	<200	<100	<100	<100	240	<100	<100	130	<100	110	35,000
CPT-7	10/2/98	55	<500	<250	<125	<125	<125	160	<125	<125	190	<125	<125	27,000
CPT-8	10/2/98	55	16	<1	<0.5	<0.5	<0.5	1.4	<0.5	6.7	11	1.3	<0.5	140
CPT-9	10/2/98	55	490	7.7	<1	<1	<1	<1	<1	<1	<1	<1	<1	9.1
California MCL			none	none	1	150	1,750	5	0.5	6	6	10	5	5

NOTES: Abbreviations:

PIPP = Push-In Plastic Piezometer
 ft bgs = feet below ground surface
 ug/L = micrograms per liter
 MEK = Methyl ethyl ketone (2-butanone)
 Xylenes = Total xylenes
 1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane
 1,1-DCE = 1,1-Dichloroethene
 c-1,2-DCE = cis-1,2-Dichloroethene
 t-1,2-DCE = trans-1,2-Dichloroethene
 PCE = Tetrachloroethene
 TCE = Trichloroethene

1. Sample CPT-4B is a duplicate of sample CPT-4A.
2. Chemical analyses were performed by Orange Coast Analytical, Inc. in Tustin, California
3. California maximum contaminant levels ("MCLs") are as reported in the Drinking Water Standards and Health Advisories Table by U.S. EPA Region IX, dated June 1998. "none" indicates that no MCL (California or federal) has been established.

Phase II Soil Investigation Report

5030 Firestone Boulevard
South Gate, California

18 February 1998

**Erler &
Kalinowski, Inc.**

Consulting Engineers and Scientists
2951 28th Street, Suite 1020
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Phase II Soil Investigation Report
Jervis B. Webb Company Property
5030 Firestone Boulevard, South Gate, California

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1. EXECUTIVE SUMMARY

Erler & Kalinowski, Inc. ("EKI") was retained by the Jervis B. Webb Company ("Webb") to perform a series of environmental investigations of the property at 5030 Firestone Boulevard in South Gate, California ("Subject Property"). The *Phase II Soil Investigation Report* summarizes investigations of the Subject Property completed by EKI through December 1997. A brief summary of the major findings of EKI's investigations at the Subject Property follows:

1. The Subject Property consists of a single parcel of land approximately 1.4 acres in size and contains one single-story former manufacturing building of approximately 20,000 square feet. The property was apparently developed between 1950 and 1953.
2. Blake Rivet Company ("Blake") manufactured aircraft rivets at the Subject Property from the 1950s until approximately 1980. Blake's manufacturing process at the Subject Property included an above ground anodizing operation that generated wastewater. Wastewater was discharged, pursuant to a permit, to a three-stage clarifier and then to the sanitary sewer. Blake apparently stored a number of raw materials at the Subject Property including metal stock and anodizing solutions. Documents available to EKI did not identify historical use or storage of chlorinated organic solvents at the Subject Property.
3. Following Blake, Webb used the Subject Property for storage of metal stock, equipment and other materials. The concrete area at the location of the clarifier was also used by Webb for temporary storage of drums of hazardous wastes. The clarifier was not used by Webb. EKI completed an initial inspection of the Subject Property on 10 April 1996. No drums or significant staining of concrete or asphalt around the clarifier was observed by EKI during the site inspection. Currently, the property is unoccupied and has been cleared of all equipment and materials. The clarifier is currently filled with sand.

Webb manufacturing operations were primarily located on the adjacent off-site property at 9301 Rayo Avenue ("Rayo Property"). Webb's activities at 9301 Rayo Avenue included metal fabrication, finishing, painting and assembly operations associated with the manufacture of industrial conveyor systems.

4. EKI observed indications of below ground concrete structures at several locations in the building. These include a concrete-lined sump and a shallow concrete-lined machine trench. The concrete floor in the building contains numerous patches where former structures or improvements may have been located. Concrete in the former anodizing area of the building is pitted, etched, broken and or cracking in several areas.

5. On 28 October 1997, Vironex, Inc. ("Vironex") of El Segundo, California completed fourteen soil borings at the Subject Property. The objective of the soil investigation was to provide chemical data to determine whether chemical releases occurred in former chemical use and storage areas at the Subject Property. Soil was cored to maximum depths ranging from approximately 10 feet below ground surface ("ft bgs") at various locations inside and outside the building, and to 20 ft bgs in the immediate vicinity of the clarifier. Soil samples were analyzed for pH by EPA Method 9045, total extractable petroleum hydrocarbons ("TEPH") by EPA Method 8015 modified, California Code of Regulations Metals ("CCR-Metals"), and volatile organic compounds ("VOCs") by EPA Methods 8240 and 8010.
6. Fourteen soil samples were analyzed for CCR metals. CCR metals were not detected at elevated concentrations in soil samples collected from beneath and around the clarifier and from other former process areas. Only one of the fourteen analyses for metals had a detectable concentration of hexavalent chromium, sample B4-10.5 had a concentration of 0.88 milligrams per kilogram ("mg/kg"). Samples of soil from above and below sample B4-10.5 (samples B4-6 and B4-16) did not have detectable hexavalent chromium.
7. TEPH was not detected in any of the ten soil samples analyzed for it. Soil pH was found to range from 6.3 to 8.8 in the samples analyzed.
8. VOCs were detected in samples of soil collected during the October 1997 soil investigation. Trichloroethene ("TCE") and tetrachloroethene ("PCE") were detected at maximum concentrations of 270 mg/kg and 140 mg/kg, respectively, in one soil sample (B4-20.5) collected from approximately 20 ft bgs beneath the clarifier. TCE and PCE were detected in most of the soil samples collected during October 1997 in the area of the former anodizing operations and, except for samples from boring B4, were detected at concentrations of less than 1 mg/kg. No other VOCs were detected.
9. On 1 and 2 December 1997, Interphase, Inc. ("Interphase") of Commerce, California completed a soil gas survey at the Subject Property. The objective of the soil gas survey was to provide additional subsurface data to identify potential source areas for the VOCs detected in samples of soil collected during the October 1997 investigation. Soil gas samples were collected from 37 separate locations at a depth of approximately 5 ft bgs and analyzed for 23 VOCs consistent with California Regional Water Quality Control Board - Los Angeles Region ("RWQCB") Primary Target Compounds.

The analytical data from the soil gas survey indicated that TCE and PCE are the primary chemicals of concern in shallow soil at the Subject Property. TCE was detected at concentrations ranging from 0.074 micrograms per liter ("ug/L") to 25 ug/L. PCE was detected at concentrations ranging from 0.021 ug/L to 28 ug/L. 1,1,1-Trichloroethane ("1,1,1-TCA") was also detected at low concentrations in approximately half of the soil gas samples with a maximum of 0.89 ug/L.

Chloroform, dichlorodifluoromethane ("Freon-12"), and trichlorofluoromethane ("Freon-11") were also detected in a few samples at low concentrations.

10. On 2 and 3 December 1997, West Hazmat Drilling Corporation ("West Hazmat") of Anaheim, California completed five deep soil borings at the Subject Property. The purpose of the deep soil investigation was to determine the vertical extent of VOC occurrence in unsaturated soil beneath the clarifier and anodizing area. Soil borings were completed to maximum depths ranging from 46.5 to 62.5 ft bgs. Groundwater was encountered at a depth of approximately 57 ft bgs. Soil samples were analyzed for VOCs by EPA Method 8010. Additional soil samples were analyzed for geotechnical properties.
11. TCE and PCE were detected in samples of soil collected during the December 1997 investigation. TCE was detected at concentrations ranging from 0.048 mg/kg to 16 mg/kg. PCE was detected at concentrations ranging from 0.026 mg/kg to 0.66 mg/kg. TCE was detected in the deepest soil samples collected from each boring completed during the December 1997 investigation at concentrations ranging from 1.3 mg/kg to 8.7 mg/kg.
12. During the December 1997 investigation, twelve soil samples were selected for geotechnical analyses including total carbon by the Walkley-Black method, moisture content by ASTM Method D2216, dry density by ASTM Method D2937, and effective permeability and air conductivity by API Method RP40. The soil samples analyzed for geotechnical properties were selected to represent most of the geologic materials encountered in the vadose zone. Analytical results indicate significant soil moisture and total carbon concentrations in the vadose zone. Moisture content ranged from 7% to 39.9%. Total organic carbon ranged from not detected to a concentration of 1.11%. Dry soil density ranged from 82.8 pounds per cubic foot ("pcf") to 112.8 pcf. Of twelve samples analyzed for air conductivity and effective permeability, six samples did not conduct air.

On the basis of the results of investigations conducted to date it appears that further actions are necessary to address the presence of VOCs in the subsurface at the Subject property.

4. REGIONAL HYDROGEOLOGICAL CONDITIONS

Unless otherwise noted, the information provided in this section was obtained from the California Department of Water Resources ("DWR") *Bulletin No. 104: Planned Utilization of the Groundwater Basins of the Coastal Plain of Los Angeles County, Appendix A, Groundwater Geology* dated June 1961.

The Subject Property is located in the Central Basin Pressure Area of the Central Basin of the Coastal Plain of Los Angeles County. Ground surface elevation at the Subject Property is roughly 110 feet above mean sea level (USGS, 1964). The surface topography of the Subject Property and vicinity appears to slope gently to the southeast in the general direction of the Los Angeles River. The Los Angeles River is located approximately 1,200 feet east of the Subject Property at its nearest location (see Figure 1, DWR, 1964).

The Subject Property is located within the Downey Plain, an alluvial depositional feature of Recent age that extends across the central lowland areas of the Central Basin. Depositional materials associated with this feature were deposited as alluvial fans formed by the Los Angeles and Rio Hondo-San Gabriel River systems. These alluvial systems have formed a very gentle plain. However, during past flood times these large rivers have produced some erosional terraces and deposited debris over most of the area. The materials associated with the Downey Plain are also referred to as Recent Alluvium. Little deformation of the Recent alluvial sediments has occurred except where they cross tectonically active areas.

The Subject Property is located along the northern axis of the Paramount Syncline, a depressional deformation feature trending northwest-southeast in the vicinity of the Subject Property. This structure was formed by the Early Pleistocene deformation of the Central Basin. The trough-shaped geometry of this structure has produced folding of Early Pleistocene deposits of primarily the Lakewood and San Pedro Formations. According to DWR, no displacement of aquifers is apparent in the vicinity of the Subject Property.

The water-bearing materials composing the groundwater basin in the vicinity of the Subject Property are Recent to Pliocene in age. These materials include unconsolidated and semi-consolidated marine and non-marine alluvial sediments. Sizes of individual particles grades from course gravel and boulders to clay. Following is a description of the major aquifers that comprise the groundwater basin in the vicinity of the Subject Property.

4.1. Regional Aquifers

The area of the Subject Property is underlain by several major hydrostratigraphic units within three geological formations: the Recent Alluvium, Lakewood Formation and San Pedro Formation. In the vicinity of the Subject Property the Recent Alluvium is present from surface elevation (110 feet above mean sea level "ft. msl") to approximately 20 to 80 ft bgs. The Recent Alluvium is apparently comprised of the Bellflower Aquiclude and Gaspur Aquifer. However, it is apparent that the Gaspur Aquifer may be partially or completely absent in the immediate vicinity of the Subject Property. In the absence of the Gaspur aquifer, an unnamed confining layer of the Lakewood Formation would compose a portion of the subsurface materials between 20 and 80 ft bgs. (Plates 6A and 6E, DWR, 1961).

The first aquifer in the vicinity of the Subject Property appears to be the Exposition Aquifer of the Lakewood Formation. The Exposition Aquifer reportedly begins at about 80 to 90 feet below ground surface and is roughly 100 to 120 feet thick. Underlying the Exposition Aquifer is an unnamed confining layer that may be present in substantial thickness in the vicinity of the Subject Property. Beneath the unnamed confining layer and/or Exposition Aquifer is the Gage Aquifer which is also part of the Lakewood Formation. The Gage Aquifer appears to begin at approximately 220 to 300 ft bgs, depending on the thickness of the unnamed confining layer, and is roughly 50 to 90 feet thick.

Beneath the Lakewood Formation is the San Pedro Formation which consists of, in descending order, a significant unnamed aquiclude, Jefferson Aquifer, Lynwood Aquifer, Silverado Aquifer, and Sunnyside Aquifer. The Jefferson, Lynwood and Silverado aquifers range in thickness from 80 to 250 feet thick in the vicinity of the Subject Property and may be interbedded by minor confining layers. The base of the Silverado Aquifer is approximately 930 to 950 ft bgs. The Silverado and Sunnyside Aquifers are interbedded by an unnamed confining layer approximately 260 to 340 feet in thickness. The Sunnyside Aquifer is 300 feet thick in the vicinity of the Subject Property. (Plates 6A and 6E, DWR, 1961).

Underlying the San Pedro Formation are the Pliocene marine sediments of the Pico Formation. Although portions of the Pico Formation may be sufficiently permeable to transmit water, the water is of poor quality and unsuitable for general use.

4.2. Regional and Local Groundwater Flow

According to the Water Replenishment District of Southern California ("WRD"), deep aquifer groundwater contours for water year 1995-1996 indicate southwesterly trending groundwater flow from the Whittier Narrows area into the Central Basin Pressure Area with a gradient of approximately 0.007 feet per foot. Depth to groundwater in the vicinity of the Subject Property is indicated to be approximately 80 to 90 ft bgs. (WRD, 1997)

Based on groundwater monitoring data from the Dial Corporation site, across Rayo Avenue and several hundred feet southeast of the Subject Property, groundwater flow is in a southerly direction at a gradient of approximately 0.003 feet/foot. The depth to groundwater in two monitoring wells located along Rayo Avenue ranged from about 45 to 55 ft bgs from April 1992 to April 1995. One well on the Dial Corporation site was found to have shallower perched groundwater (EMCON, 1995). Bechtel, however, reported that groundwater flow in the "upper group of aquifers" is to the north-northwest. (Bechtel 1994, page 6)

Actual depth to groundwater at the Subject Property was found to be approximately 57 ft bgs at the southeasterly boundary during investigations by EKI. The direction of groundwater flow in the water table aquifer beneath the Subject Property has not been determined.

6. FINDINGS

6.1. Chemicals of Concern

EKI's investigations included sampling and analysis of soil gas for VOCs and soil for VOCs, metals, pH and TEPH. On the basis of the analyses completed it appears that VOCs, specifically TCE and PCE, are present in the vadose soil at the Subject Property at concentrations which warrant further investigation. Other chemicals do not appear to warrant further investigation.

6.2 Potential Source Areas

The clarifier and former anodizing operation area appears to be the location of past releases of TCE and PCE. The highest VOC concentrations were detected in the general area of the clarifier and former anodizing operations. The soil sample (B4-20.5) with the highest TCE and PCE concentrations was collected beneath the clarifier. Based on sampling results, no other significant potential source area was identified.

6.3 Distribution of TCE and PCE in Vadose Soil

Concentrations of TCE and PCE detected in shallow soil were relatively low compared to concentrations of these chemicals detected in deeper soil samples. Both TCE and PCE were detected in most of the shallow soil samples collected in the area of the clarifier and former anodizing operations. The highest concentrations of TCE and PCE detected in soil samples from 11 ft bgs or less were 0.11 mg/kg and 0.40 mg/kg, respectively, both in sample B18-11 next to the clarifier.

The highest concentrations of TCE and PCE detected at the site were in deep soil samples (between 20 ft bgs to 46 ft bgs) from borings B4, B18, and B19 next to the clarifier. The highest concentration of each was detected in soil sample B4-20.5 beneath the clarifier with TCE at 270 mg/kg and PCE at 140 mg/kg. Concentrations of TCE were greater than 1 mg/kg in most of the soil samples analyzed between 20 ft bgs and 46 ft bgs at the clarifier (Figure 10). Concentrations of PCE were much lower in the same soil samples. None of the soil collected from below sample B4-20.5 had concentrations of PCE greater than 0.66 mg/kg.

There appears to have been lateral migration of TCE, and to a lesser extent also PCE, from the area of the clarifier. The deepest soil sample from each of the three perimeter soil borings B15, B16, and B17 (each located approximately 50 feet from the clarifier) was found to have a concentration of TCE greater than 1 mg/kg (B15-44.5, B16-53.5, and B17-46). PCE, however, was not detected in the deepest samples from the perimeter

borings. An approximation of the lateral distribution of TCE in soil at 20 and 40 ft bgs are shown on Figures 11 and 12, respectively.

The depth to groundwater was found to be approximately 57 ft bgs during these investigations. No groundwater sampling was performed.

6.4 Conclusions

On the basis of the results of investigations conducted to date it appears that further actions are necessary to address the presence of VOCs in the subsurface at the Subject property.

Phase II Groundwater Investigation Report

Jervis B. Webb Company Property
5030 Firestone Boulevard
South Gate, California

30 June 1998

**Erler &
Kalinowski, Inc.**

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Phase II Groundwater Investigation Report
Jervis B. Webb Company Property
5030 Firestone Boulevard, South Gate, California

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1. INTRODUCTION

Erler & Kalinowski, Inc. ("EKI") is pleased to present this *Phase II Groundwater Investigation Report* for the property owned by the Jervis B. Webb Co. ("Webb") and located at 5030 Firestone Boulevard in South Gate, California ("Subject Property" or "Site;" see Figure 1). The principal objectives of this investigation were to determine if volatile organic compounds ("VOCs") detected in samples of soil collected at the Subject Property are also present in groundwater beneath the Site and to estimate the direction of groundwater flow beneath the Site.

Phase II investigations of areas of environmental concern and vadose zone soil at the Subject Property were completed by EKI from October through December 1997. Chemical analyses of several samples of soil collected at the Site detected two VOCs, trichloroethene ("TCE") and tetrachloroethene ("PCE"). The highest concentrations of TCE (270 milligrams per kilogram or mg/kg) and PCE (140 mg/kg) were detected in samples of soil collected at depths of 20 feet to 46 feet beneath the ground surface ("ft bgs") near the clarifier and former anodizing areas of the Site. It was concluded by Webb that two VOCs, TCE and PCE, were present in vadose zone soil at the Subject Property at concentrations which warranted further investigation. The results of the Phase II soil investigation were reported in EKI's *Phase II Soil Investigation Report* for the property located at 5030 Firestone Boulevard in South Gate, California, dated 18 February 1998 ("Phase II Soil Report").

In a meeting attended by staff of EKI and the California Regional Water Quality Control Board, Los Angeles Region ("RWQCB") on 6 February 1998, staff of the RWQCB indicated that they concurred with EKI's presentation of the findings of the Phase II soil investigation, and stated that the next phase of investigation at the Subject Property should include sampling and analysis groundwater at both on-site and off-site locations.

The Phase II groundwater investigation documented in this report included installation and sampling of three groundwater monitoring wells and additional characterization of subsurface soil at the Subject Property. Groundwater was sampled from the three on-site wells on 4 March 1998 and on 20 May 1998. In addition, samples of groundwater were collected from two off-site groundwater monitoring wells owned by the Dial Corporation ("Dial"), located south of the Subject Property along Rayo Avenue, during the groundwater monitoring event 20 May 1998.

EKI's investigations of the Subject Property were performed in accordance with applicable guidelines and general requirements of the RWQCB concerning subsurface investigations. EKI investigation activities were performed under the supervision of Mr. Steven G. Miller, P.E., a State of California registered civil engineer.

2. REGIONAL HYDROGEOLOGY

Unless otherwise noted, the information provided in this section was largely obtained from the California Department of Water Resources ("DWR") *Bulletin No. 104: Planned Utilization of the Groundwater Basins of the Coastal Plain of Los Angeles County, Appendix A, Groundwater Geology*, dated June 1961.

The Subject Property is located in the Coastal Plain of Los Angeles County. Ground surface elevation at the Subject Property is roughly 110 feet above mean sea level (USGS, 1964). The surface topography of the Subject Property and vicinity appears to slope gently to the southeast in the general direction of the Los Angeles River. The Los Angeles River is located approximately 1,200 feet east of the Subject Property at its nearest location (see Figure 1).

The Subject Property is located within the Southgate-Santa Ana Depression of the Downey Plain physiographic province, an alluvial depositional feature primarily composed of Quaternary sediments. Depositional materials associated with this feature were deposited as alluvial fans formed by the Los Angeles, Rio Hondo, and San Gabriel River systems. Sediments encountered from the ground surface to the greatest depth of investigation at the Subject Property (approximately 73 ft bgs) are referred to as Recent Alluvium.

Hydrologically, the Subject Property is located within the Central Basin Pressure Area of the Los Angeles Central Groundwater Basin. According to DWR, 1961, the water-bearing geologic members of regional significance that may be encountered beneath the Subject Property are, with increasing depth, the Bellflower Aquiclude and the Gaspur (or Exposition) Aquifer of the Recent Alluvium, the Exposition (or Gaspur) and Gage Aquifers of the upper Pleistocene Lakewood Formation, and the Hollydale, Jefferson, Lynwood, and Silverado Aquifers of the lower Pleistocene San Pedro Formation. Referring to maps in DWR, 1961, the groundwater encountered at the Subject Property during the investigation described in this report appears to occur within sediments the Bellflower Aquiclude and may be directly underlain by saturated sediments of either the Gaspur Aquifer or the Exposition Aquifer (these aquifers are in contact near the Subject Property). The bottom of the Exposition Aquifer may occur at approximately 170 ft bgs near the Subject Property, according to DWR, 1961. Although no data is presented in the vicinity of the Subject Property, it can be inferred from maps in the DWR, 1961 report that the base of the freshwater-bearing sediments near the Subject Property probably occurs near 3,000 ft bgs.

According to the Water Replenishment District of Southern California ("WRDSC"), deep aquifer (probably the Silverado Aquifer) groundwater contours for water year 1995-1996 indicate southwesterly trending groundwater flow from the Whittier Narrows area into the

Central Basin Pressure Area with a gradient of approximately 0.007 feet per foot (WRDSC, 1997).

The City of South Gate supplies water to the Subject Property and the surrounding area. The City has 14 water supply wells of which 11 are currently active. At least four of the active wells have been found to contain PCE and so extracted groundwater from these wells is being treated (telephone conversation between Mr. John Chambers, City of South Gate and Mr. Steven Miller of EKI on 29 April 1996.)

Water quality has been monitored at several City of South Gate wells near the Subject Property by the WRDSC. The following table identifies the chlorinated VOCs detected in wells monitored by the WRDSC that are located within approximately one-half mile of the Subject Property (WRDSC, 1995):

South Gate Well No.	Approximate Distance/ Direction from the Subject Property	Approximate Screen Interval (ft bgs)	Aquifer Screened	VOC(s) Detected
7	1/4 mile-northwest	-	Lynwood	TCE, PCE, 1,1-DCE
13	1/2 mile-southwest	-	Silverado	PCE
14	1/2 mile southwest	745-767	Silverado	PCE
18	1/2 mile-southwest	600-758	Silverado	PCE
19	1/2 mile-southwest	610-746	Silverado	PCE
23	1/4 mile-southeast	530-798	Lynwood & Silverado	PCE
25	1/2 mile-east-southeast	-	Exposition & Gage	TCE, PCE

Based on groundwater monitoring data from the former Dial Corporation facility, located across Rayo Avenue, just east of the Subject Property, groundwater flows in a southerly direction at a gradient of approximately 0.003 feet/foot. The depth to groundwater in two monitoring wells located along Rayo Avenue ranged from about 45 to 55 feet below ground surface from April 1992 to April 1995 (see wells DIAL MW-4 and DIAL MW-5 on Figure 2). One well on the Dial Corporation site was found to have shallower perched groundwater (data in this paragraph were taken from EMCON, 1995).

6. SUMMARY

The principal objectives of this investigation were to determine if VOCs detected in samples of soil collected at the property owned by the Jervis B. Webb Co. in South Gate, California are also present in groundwater beneath the Site and to estimate the direction of groundwater flow beneath the Site. During previous investigations at the Subject Property, TCE and PCE were detected at maximum concentrations of 270 mg/kg and 140 mg/kg, respectively, in samples of soil collected near the clarifier and former anodizing operations at the Site. The groundwater investigation documented in this report included installation and sampling of three on-site groundwater monitoring wells, sampling of two off-site groundwater monitoring wells, and additional characterization of subsurface soil at the Subject Property.

Three groundwater monitoring wells were installed at the Subject Property on 24 and 25 February 1998. The wells are screened in the groundwater table aquifer beneath the Site at depths ranging from 40 ft bgs to 70 ft bgs. The greatest depth of investigation at the Subject property thus far is 73 ft bgs.

Samples of soil were collected from the soil borings drilled for installation of the new groundwater monitoring wells for chemical analysis and characterization of soil. Nine samples of soil were collected from soil borings MW-1, MW-2, and MW-3 at depths of approximately 10 ft bgs, 20 ft bgs, and 30 ft bgs and submitted to an analytical laboratory for analysis of VOCs. PCE and TCE were detected in soil samples collected from soil boring MW-1 at maximum concentrations of 23 ug/kg and 62 ug/kg, respectively. No analytes were detected above method detection limits in the soil samples collected from soil borings MW-2 and MW-3.

Soil present in the vadose zone beneath the Subject Property is predominantly composed of silt with variable clay and sand content. However, predominantly clayey and sandy soils are also present. The vadose zone is characterized by interbedded clay, silt, and sand layers, some of which may be continuous throughout the investigation area.

The depth to groundwater in on-site monitoring wells MW-1, MW-2, and MW-3 was measured on 27 February, 2 and 4 March, 8 April, and 20 May 1998. The depth to groundwater in the on-site wells ranged from approximately 43.5 ft bgs to 44.8 ft bgs. The depth to groundwater measurements was also measured in off-site monitoring wells DIAL MW-4 and DIAL MW-5 on 20 May 1998. As inferred from the groundwater elevation data, the direction of groundwater flow in the groundwater table aquifer beneath the Subject Property appears to be primarily toward the southeast. The elevation of the groundwater table at wells MW-1, MW-2, and MW-3 increased an average distance of 0.7 feet from 27 February 1998 through 20 May 1998.

Following development and purging, samples of groundwater were collected from monitoring wells MW-1, MW-2, and MW-3 on 4 March and 20 May 1998. Samples of groundwater were collected from monitoring wells DIAL MW-4 and DIAL MW-5 on 20 May 1998 (note that these wells were purged, but not re-developed prior to sampling). Although several VOCs were detected in the samples of groundwater collected on 4 March and 20 May 1998, TCE was the predominant VOC detected in each sample. The maximum concentrations of TCE detected in the samples of groundwater collected from on-site monitoring wells MW-1, MW-2, and MW-3 on 4 March 1998 were 25,000 ug/L, 3,000 ug/L, and 2,800 ug/L, respectively. The concentrations of TCE detected in the samples of groundwater collected from the off-site monitoring wells DIAL MW-4 and DIAL MW-5 were 16 ug/L and 28 ug/L, respectively. The chemical analyses performed on the samples of groundwater collected on separate dates from the on-site monitoring wells MW-1, MW-2, and MW-3 provided similar results.

In addition to TCE, PCE, cis and trans 1,2-DCE, 1,1-DCE, 1,1-DCA, and toluene were detected in the samples of groundwater collected from on-site wells MW-1, MW-2, and MW-3. In each sample of groundwater collected from the on-site monitoring wells, the concentrations of these additional chemicals that were detected were generally at least a factor of ten lower than the concentration of TCE detected in the same sample.

The chemical signatures of the samples of groundwater collected from the off-site monitoring wells, DIAL MW-4 and DIAL MW-5, were somewhat different than the chemical signatures of the samples of groundwater collected from the on-site wells in that:

- PCE, 1,1-DCE, and 1,1-DCA were not detected in the samples collected from the off-site monitoring wells, and
- benzene, xylenes, and 1,2-DCA were detected in the samples of groundwater collected from the off-site wells, but were not detected in any of the samples collected from the on-site monitoring wells.

The concentrations of TDS detected in the samples of groundwater collected from on-site monitoring wells MW-1, MW-2, and MW-3 ranged from 1,100 mg/L to 2,500 mg/L. The concentrations of TDS detected in the samples of groundwater collected from off-site monitoring wells DIAL MW-4 and DIAL MW-5 were 1,300 mg/L and 6,300 mg/L, respectively.

The results of this investigation indicate that several VOCs can be detected in samples of groundwater collected from three monitoring wells at the Subject Property. The elevated concentrations of TCE and PCE detected in samples of soil and groundwater collected near the clarifier and former anodizing areas of the Subject Property suggest that these chemicals may have been released on this portion of the property. However, the elevated concentrations of TCE detected in samples of groundwater collected from monitoring well MW-2 and the location of this well on the inferred up-gradient portion of the Subject property suggest that additional sources of the TCE detected in groundwater may exist to the

north of the Subject Property. In addition, the somewhat different chemical signatures of the samples of groundwater collected at the Subject Property versus those collected from the monitoring wells located off-site along Rayo Avenue suggests that the sources of chemicals detected in the samples collected from the off-site wells may not yet be completely identified.

4. RESULTS OF SOIL SAMPLING AND ANALYSIS

4.1. Characterization of Soil

Soil present in the vadose zone beneath the Subject Property is predominantly composed of silt with variable clay and sand content. However, predominantly clayey and sandy soils are also present. The vadose zone is characterized by interbedded clay, silt and sand layers, some of which may be continuous throughout the investigation area.

The sediments observed at the Subject Property may be correlated with the Downy Plain alluvium as discussed in Section 2. Given the reported nature of deposition for the Downey Plain Alluvium, i.e., stream channel and overbank splay deposits associated with the Quarternary fluctuations of Los Angeles River, it is possible that the soil stratigraphy observed at the Subject Property is variable laterally as well as vertically in the immediate vicinity of the property.

Several recognizable soil layers were observed to be present in soil borings MW-1, MW-2, and MW-3. These soil types were also observed in soil borings logged during EKI's previous investigations at the Subject Property in December 1997 (see the Phase II Soil Report). In soil borings MW-1, MW-2, and MW-3, a moderately to highly plastic clay unit approximately 4 feet in thickness was observed at depths ranging from approximately 20 to 26 ft bgs. This unit was also observed in variable thicknesses in soil borings B15 through B19, completed at the Subject Property in December 1997. This clay unit is overlain and underlain by silty soil in soil borings MW-1, MW-2, and MW-3, and B15 through B19.

A pronounced sandy unit previously observed in soil borings B15 through B19 at a depth of approximately 34 to 36 ft bgs was also observed in soil borings MW-1, MW-2, and MW-3 at depths ranging from 35 to 37 ft bgs. This unit was observed to vary in thickness from approximately 3 to 5 feet in soil borings MW-1, MW-2, and MW-3. A second, more pronounced sandy unit was observed at depths near 65 ft bgs in soil borings MW-1 and MW-2 and near 60 ft bgs in soil boring MW-3. The lower contact of this sandy unit was not observed within the total depth (73 ft bgs) of sampling at each location (see Appendix A).

4.2. Analytical Results for Soil

Samples of soil collected on 24 and 25 February 1998 were analyzed by Orange Coast Analytical, Inc. ("Orange Coast") of Tustin, California for VOCs using U.S. Environmental Protection Agency ("EPA") Method 8010. Nine samples of soil were collected from soil borings MW-1, MW-2, and MW-3 at depths of approximately 10 ft bgs, 20 ft bgs, and

30 ft bgs and submitted to Orange Coast for analysis. The analytical results for the chemical analyses of soil samples are summarized in Table 2. Chain-of-Custody forms and laboratory reports for the soil samples are attached in Appendix B.

The results of chemical analyses of soil samples collected from soil borings MW-1, MW-2, and MW-3 indicate that PCE and TCE were the only analytes detected at concentrations above method detection limits in these samples. PCE and TCE were detected in soil samples collected from soil boring MW-1 at maximum concentrations of 23 micrograms per kilogram ("ug/kg") and 62 ug/kg, respectively. No analytes were detected above method detection limits in the soil samples collected from soil borings MW-2 and MW-3.

4.2.1. Quality Assurance/Quality Control for Soil Chemical Analyses

Standard laboratory QA/QC procedures used for the project included method blanks and matrix spikes/matrix spike duplicates. Percent recovery of matrix spikes and matrix spike duplicates were within acceptable ranges. No analytes were detected in the method blanks analyzed for the project. QA/QC results are provided with the laboratory reports in Appendix C.

5. RESULTS OF WELL GAUGING AND GROUNDWATER ANALYSES

5.1. Measurements of Groundwater Elevation

The depth to groundwater in monitoring wells MW-1, MW-2, and MW-3 was measured on 27 February, 2 and 4 March, 8 April, and 20 May 1998. The depth to groundwater measurements was also measured in monitoring wells DIAL MW-4 and DIAL MW-5 on 20 May 1998. These data are provided in Table 3. Contours representing the elevation of the groundwater table on 20 May 1998 are shown on Figure 3.

As inferred from the contours of groundwater elevation shown on Figure 3, the direction of groundwater flow in the groundwater table aquifer beneath the Subject Property is primarily toward the southeast. Using the data in Table 3, the elevation of the groundwater table at wells MW-1, MW-2, and MW-3 increased an average distance of 0.7 feet from 27 February 1998 through 20 May 1998.

As noted in Table 3, the top-of-casing elevations of the reference points used by EKI for gauging depth to water at the Dial wells were not surveyed by Rattray on 6 March 1998. However, based on measurements conducted in the field and survey data for the tops of the well box lids for DIAL MW-4 and DIAL MW-5, approximate top-of-casing reference point elevations have been calculated.

5.2. Analytical Results for Groundwater Samples

Samples of groundwater were collected from monitoring wells MW-1, MW-2, and MW-3 on 4 March and 20 May 1998. Samples of groundwater were collected from monitoring wells DIAL MW-4 and DIAL MW-5 on 20 May 1998. In addition, a duplicate sample of groundwater was collected from well MW-1 during the sampling event on 4 March 1998. All samples of groundwater were submitted to Orange Coast for chemical analyses. The samples collected on 4 March 1998 were analyzed for VOCs using EPA Method 8260. The samples collected on 20 May 1998 were analyzed by Orange Coast for VOCs using EPA Method 8260 and for total dissolved solids ("TDS") using EPA Method 160.1. The analytical results for groundwater samples collected during this investigation are summarized in Table 4. Concentrations of TCE detected in groundwater samples are shown on Figure 2. Chain-of-Custody forms and laboratory reports are attached in Appendix D.

Although several VOCs were detected in the samples of groundwater collected on 4 March and 20 May 1998, TCE was the predominant VOC detected in each sample. The maximum

concentrations of TCE detected in the samples of groundwater collected from on-site monitoring wells MW-1, MW-2, and MW-3 on 4 March 1998 were 25,000 ug/L, 3,000 ug/L, and 2,800 ug/L, respectively. The concentrations of TCE detected in the samples of groundwater collected from the off-site monitoring wells DIAL MW-4 and DIAL MW-5 were 16 ug/L and 28 ug/L, respectively. The chemical analyses performed on the samples of groundwater collected on separate dates from the on-site monitoring wells MW-1, MW-2, and MW-3 provided similar results.

In addition to TCE, PCE, cis and trans 1,2-dichloroethene ("cis and trans 1,2-DCE"), 1,1-dichloroethene ("1,1-DCE"), 1,1-dichloroethane ("1,1-DCA"), and toluene were detected in the samples of groundwater collected from on-site wells MW-1, MW-2, and MW-3. In each sample of groundwater collected from the on-site monitoring wells, the concentrations of these additional chemicals that were detected were generally at least a factor of ten lower than the concentration of TCE detected in the same sample.

The chemical signatures of the samples of groundwater collected from the off-site monitoring wells, DIAL MW-4 and DIAL MW-5, were somewhat different than the chemical signatures of the samples of groundwater collected from the on-site wells in that:

- PCE, 1,1-DCE, and 1,1-DCA were not detected in the samples collected from the off-site monitoring wells, and
- benzene, xylenes, and 1,2-dichloroethane ("1,2-DCA") were detected in the samples of groundwater collected from the off-site wells, but were not detected in any of the samples collected from the on-site monitoring wells.

The concentrations of TDS detected in the samples of groundwater collected from on-site monitoring wells MW-1, MW-2, and MW-3 ranged from 1,100 mg/L to 2,500 mg/L. The concentrations of TDS detected in the samples of groundwater collected from off-site monitoring wells DIAL MW-4 and DIAL MW-5 were 1,300 mg/L and 6,300 mg/L, respectively.

5.2.1. Quality Assurance/Quality Control for Soil Chemical Analyses

Standard laboratory QA/QC procedures used for the project included analysis of method blanks and matrix spikes/matrix spike duplicates. Percent recovery of matrix spikes and matrix spike duplicates was within acceptable ranges. No analytes were detected in the method blank samples analyzed for this project. QA/QC results are provided with the laboratory reports in Appendix D.

Quarterly Progress Report April through June 2001

Jervis B. Webb Company of California
5030 Firestone Boulevard
South Gate, California

24 July 2001

**Erler &
Kalinowski, Inc.**

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2001 AUG -6 P 4: 50

31 July 2001

Mr. Steven Hariri
Site Cleanup Unit
California Regional Water Quality Control Board
Los Angeles Region
320 4th Street, Suite 200
Los Angeles, CA 90013

Subject: Quarterly Progress Report for April through June 2001 and
Request for Reduction in the Frequency of Groundwater Monitoring
for the Jervis B. Webb Company of California Property,
5030 Firestone Boulevard, South Gate, California
(RWQCB SLIC File No. 744; EKI 991103.01)

Dear Mr. Hariri:

On behalf of Jervis B. Webb Company of California ("Webb"), Erler & Kalinowski, Inc. ("EKI") is pleased to present the enclosed *Quarterly Progress Report for April through June 2001*, dated 24 July 2001. This report describes the groundwater monitoring and soil remediation activities completed during the period from April through June 2001 at the Webb property located at 5030 Firestone Boulevard in South Gate, California ("Site").

As shown in the enclosed report and other recent reports, quarterly groundwater monitoring at the Site during the past three years has yielded consistent results. Webb has conducted quarterly groundwater monitoring at the Site since March 1998; the enclosed progress report summarizes the results of the thirteenth consecutive quarter of groundwater monitoring at the Site. During these 13 groundwater monitoring events, the depth to groundwater generally has been measured once per month and samples of groundwater have been collected once per quarter from each of the monitoring wells at the Site. Each of the samples of groundwater collected at the Site have been analyzed for volatile organic compounds ("VOCs") using U.S. Environmental Protection Agency ("EPA") Method 8260B, or an equivalent method. In addition, the samples of groundwater collected during March and June 2001 were also analyzed for California Code of Regulations ("CCR") metals using EPA Methods 200.7, 206.2, 218.4, and 245.1.

The principle results of the groundwater monitoring performed at the Site are as follows:

- Monthly measurements of the depth to groundwater indicate that shallow groundwater beneath the Site consistently flows toward the south.

003014

Letter to Mr. Steven Hariri
Regional Water Quality Control Board
31 July 2001
Page 2

**Erler &
Kalinowski, Inc.**


- The primary chemical of concern detected in samples of groundwater collected from monitoring wells at the Site is trichloroethene ("TCE"). The concentration of TCE detected in samples of groundwater collected from each of the monitoring wells at the Site has not varied significantly during three years of monitoring. As can be shown from the data provided in the enclosed report, the standard deviation of the TCE concentration detected in samples of groundwater collected from each well are less than 22 percent of the mean concentration for each well.
- No VOCs have been detected in samples of groundwater collected from downgradient monitoring well MW-4 during the last five quarterly monitoring events.

Given the consistent results obtained from three years of groundwater monitoring at the Site, Webb requests that the California Regional Water Quality Control Board, Los Angeles Region ("RWQCB") reduce the required frequency of groundwater monitoring and reporting at the Site to one event per year. If this request is acceptable to the RWQCB, Webb proposes to initiate annual groundwater monitoring at the Site during January 2002. The groundwater monitoring will consist of annual measurement of the depth to groundwater and collection of groundwater samples from each well at the Site. The samples of groundwater collected at the Site will be analyzed for VOCs using EPA Method 8260B or an equivalent method. Webb will summarize the results of the groundwater monitoring in annual progress reports which will be submitted to the RWQCB within 60 days of the groundwater monitoring event. We look forward to receiving your approval for this modification.

Please contact us if you have any comments or questions regarding the enclosed report or Webb's request for reduction in the frequency of groundwater monitoring at the Site.

Very truly yours,

ERLER & KALINOWSKI, INC.



Steven R. Chambers, Ph.D.
Project Manager

cc: Mr. Michael Farley, Esq., Jervis B. Webb Company
Mr. Michael Feeley, Esq., Latham & Watkins

003015

Quarterly Progress Report: April through June 2001

Jervis B. Webb Company of California

5030 Firestone Boulevard, South Gate, California

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Jervis B. Webb Company of California
5030 Firestone Boulevard, South Gate, California

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2. QUARTERLY GROUNDWATER MONITORING

2.1. Measurements of Groundwater Elevation

The depth to groundwater in each of the five groundwater monitoring wells at the Site was measured on 24 April and 5 June 2001 (see Figure 2 for well locations). These data are provided in Table 1. The depth to the groundwater table beneath the Site is approximately 45 feet below ground surface ("ft bgs"). Contours representing the elevation of the groundwater table on 24 April and 5 June 2001 are shown on Figures 3 and 4, respectively. As inferred from the contours shown on these figures, the primary direction of groundwater flow in the groundwater table aquifer beneath the Site appears to be toward the south-southeast.

2.2. Groundwater Sampling

Samples of groundwater were collected from each of the five groundwater monitoring wells at the Site on 5 June 2001. In addition, a duplicate sample of groundwater was collected from well MW-5. All samples of groundwater were submitted to Orange Coast Analytical, Inc. in Tustin, California, for analyses of volatile organic compounds ("VOCs") using United States Environmental Protection Agency ("EPA") Method 8260B, total arsenic using EPA Method 206.2, and California Code of Regulations ("CCR") metals, including hexavalent chromium, using EPA Methods 200.7, 218.4, and 245.1. The analytical results for VOCs and metals detected in groundwater samples collected during this monitoring event are summarized in Tables 2 and 3, respectively.

2.2.1. Groundwater Sampling Procedures

Prior to sampling of groundwater, each well was purged of a minimum of three well-casing volumes of groundwater using a submersible, electric pump. Groundwater purging was performed by West Hazmat Drilling Corp. ("West Hazmat") of Anaheim, California and groundwater samples were collected by EKI. All down-hole equipment was thoroughly steam cleaned before use at each well.

During purging of the monitoring wells on 5 June 2001, the temperature, pH, conductivity, and turbidity of the purged groundwater were recorded by EKI. The instruments used for monitoring the purged groundwater were calibrated prior to commencement of groundwater purging. For each groundwater monitoring well, the time, water quality parameters, and volume of purged groundwater were recorded on forms in the field (see Appendix A). Purging at each well continued until the variability of the monitored groundwater quality parameters stabilized to within approximately ten percent. Groundwater quality parameters were generally stable after purging three casing volumes of water from each well. The final

turbidity of the purged groundwater ranged from 0.14 to 4.9 nephelometric turbidity units (see Appendix A).

A groundwater sample was collected from each monitoring well using a disposable polyethylene bailer. A new bailer was used to collect the sample from each well. A sample label that included a unique sample identification number, the time, and the date when the sample was collected was attached to each sample container. Sample containers were sealed in zip-lock plastic bags and placed in a cooler with ice for temporary storage and transport to the analytical laboratory. Chain-of-Custody forms were initiated in the field and stored with the samples. Laboratory reports and Chain-of-Custody forms for groundwater samples are attached in Appendix B.

2.2.2. Analytical Results for Groundwater Samples

2.2.2.1. Volatile Organic Compounds

Trichloroethene ("TCE"), cis-1,2-dichloroethene ("c-1,2-DCE"), and tetrachloroethene ("PCE") were the only VOCs detected in the samples of groundwater collected at the Site on 5 June 2001 (see Table 2). The concentrations of TCE detected in the samples of groundwater collected at the Site are shown on Figure 6. Consistent with previous results, TCE was the chemical of concern detected with the greatest frequency (five of six samples) and at the highest concentration (31,000 micrograms per liter ("ug/L") in well MW-1). The concentrations of TCE (<0.5 to 31,000 ug/L), c-1,2-DCE (<0.5 to 350 ug/L), and PCE (<0.5 to 150 ug/L) detected in samples of the groundwater collected at the Site during June 2001 were within the ranges of concentrations detected during previous monitoring at the Site (see Table 2). No VOCs were detected in the sample of groundwater collected from downgradient monitoring well MW-4.

2.2.2.2. Metals

As requested by the RWQCB in its meeting with Webb on 8 February 2001, the samples of groundwater collected at the Site during June 2001 were analyzed for CCR metals. Each sample of groundwater was filtered at the analytical laboratory prior to analysis for metals. Arsenic (0.027 to 0.32 milligrams per liter or "mg/L"), barium (0.030 to 0.32 mg/L), molybdenum (<0.05 to 0.95 mg/L), and zinc (0.016 to 0.024 mg/L) were the only metals detected in the samples of groundwater collected at the Site on 5 June 2001 (see Table 3). No other metals, including chromium, were detected in the samples of groundwater collected from the monitoring wells at the Site.

2.2.3. Quality Assurance/Quality Control

Standard laboratory QA/QC procedures used for the project included analyses of matrix spikes, matrix spike duplicates, a quality control standards, and method blanks. The percent recoveries of the matrix spike, matrix spike duplicate, and the quality control standards were

within acceptable ranges. No analytes were detected in the method blank samples analyzed for this project. QA/QC results are provided with the laboratory reports in Appendix B.

A duplicate groundwater sample was collected from monitoring well MW-5 (see Tables 2 and 3). Two VOCs (TCE and c-1,2-DCE) and four metals (total arsenic, barium, molybdenum, and zinc) were detected in both of the samples of groundwater collected from well MW-5. The relative percentage differences ("RPDs") for these analytes ranged between zero and 64 percent. The only RPDs above 25 percent were those for barium (64 percent) and zinc (43 percent), both of which were detected at low concentrations. The RPDs indicate an acceptable range of sampling and analytical reproducibility.

An equipment rinsate blank also was collected and analyzed during the groundwater sampling event on 5 June 2001. Following the sampling of well MW-5 and steam cleaning of the purge pump, the equipment rinsate blank was collected by pouring water over the pump into sample containers. The rinse water was provided by West Hazmat from an offsite source. A sample of the rinse water also was submitted to the analytical laboratory for analysis. The equipment rinsate blank and the sample of rinse water were analyzed for VOCs using EPA Method 8260B. The concentrations of chemicals detected in the equipment rinsate blank were 5.8 ug/L of bromoform, 3.4 ug/L of methyl tert-butyl ether ("MTBE"), and 1.1 ug/L of chlorodibromomethane. These chemicals were not detected above method detection limits in any of the groundwater samples collected from the monitoring wells.

Due to these detections in the equipment rinsate blank, the rinse water sample was analyzed on 13 June 2001 in an effort to identify the source of the VOCs. The concentrations of chemicals detected in the rinsate water sample were 6.7 ug/L of bromoform, 4.5 ug/L of MTBE, and 1.6 ug/L of chlorodibromomethane. All of the chemicals detected in the rinsate blank sample were also detected in the rinsate water sample, with the concentration of each chemical greater in the rinsate water sample than in the rinsate blank sample. Therefore, it appears that the source of the VOCs detected in the equipment rinsate blank was the rinse water used to prepare the samples. However, as none of the chemicals detected in the equipment rinsate blank and rinsate water samples were detected above method detection limits in any of the groundwater samples collected at the Site, it does not appear that the rinse water affected the integrity of the groundwater samples.

3. SOIL REMEDIATION

3.1. Description of the Soil Vapor Extraction System

3.1.1. Soil Vapor Wells

Four soil vapor extraction wells and four soil vapor monitoring probes were installed at the Site during June 1999 (see Figure 7). The wells and probes were designed to allow for vapor extraction and monitoring in both the shallow and deep vadose zones at the Site. All of the wells were constructed using Schedule 40 PVC casing and screen. More detailed descriptions of well construction and subsurface conditions at the Site are contained in reports previously provided to the RWQCB (see EKI, 14 April 1999; EKI, 13 October 1999).

On 29 June 2000, two of the soil vapor monitoring probes (VMP-D1 and VMP-D2) were converted to extraction wells by connecting the probes to the soil vapor extraction system at the Site with two-inch diameter PVC pipe. These wells have been used as extraction wells during system operation since 6 July 2000. On 8 March 2001, vapor monitoring probe VMP-1 was converted to an extraction well by connecting the probe to the soil vapor extraction system at the Site with a two-inch diameter hose. This well has been used as an extraction well during system operation since 8 March 2001.

Soil Vapor Extraction Wells: The four shallow vadose zone SVE wells (see locations SVE-1, SVE-2, SVE-3, and VMP-1 on Figure 7) are constructed with two-inch diameter PVC casing. Wells SVE-1, SVE-3, and VMP-1 have slotted screen from approximately 19 to 25 ft bgs, and have total depths of approximately 25 ft bgs. Well SVE-2 has slotted screen from approximately 18 to 24 ft bgs, and has a total depth of approximately 24 ft bgs.

The three deep vadose zone SVE wells are wells SVE-D1, VMP-D1, and VMP-D2. Well SVE-D1 is constructed with four-inch diameter PVC casing with slotted screen from approximately 30 to 40 ft bgs, and has a total depth of approximately 44 ft bgs. Deep vadose zone SVE wells VMP-D1 and VMP-D2 are constructed in the same boreholes with shallow vadose zone SVE wells SVE-2 and SVE-3, respectively, and are constructed with 2-inch diameter PVC casing. Well VMP-D1 has slotted screen from approximately 30 to 40 ft bgs, and has a total depth of approximately 43 ft bgs. Well VMP-D2 has slotted screen from approximately 31 to 41 ft bgs, and has a total depth of approximately 44 ft bgs.

Soil Vapor Monitoring Probes: The shallow vadose zone vapor monitoring probe (see location VMP-2 on Figure 7) is constructed with two-inch diameter PVC casing with slotted screen from approximately 19 to 25 ft bgs, and has a total depth of approximately 25 ft bgs.

3.1.2. Soil Vapor Extraction and Treatment System

Installation of the SVE system was completed at the Site during March 2000. Soil vapors from the extraction wells are passed through a condensate knock-out vessel and through a 200 cubic feet per minute ("cfm") blower (see Figure 8). The soil vapors are then passed through a heat exchanger and two 1,000-pound granular activated carbon ("GAC") vessels in series, with the treated vapors exhausted to the atmosphere under permit of the South Coast Air Quality Management District ("SCAQMD"). Valves on piping from each well and an ambient air inlet valve located ahead of the knockout vessel allow regulation of air extracted from the wells. PVC pipe and fittings are used throughout the system. Electrical power to the system is metered, and the system is enclosed in a fenced area.

Vacuum gauges, a hand-held flow meter, and sampling ports are used to monitor each of the vapor extraction wells. Vacuum is measured in inches of water column ("in-wc"), vapor flow rate is measured in actual cubic feet per minute ("acfm"), and concentrations of VOCs are measured in parts per million by volume ("ppmv"). Sampling ports were installed at each of the vapor wells and probes and several locations in the SVE system for monitoring of VOC concentrations.

3.2. Operation and Monitoring of the SVE System

3.2.1. System Operation

The SVE system began operating on 16 March 2000. Throughout this reporting period (i.e., April through June 2001), wells SVE-1, SVE-2, SVE-3, VMP-1, SVE-D1, VMP-D1, and VMP-D2 were used as vapor extraction wells. Operation and maintenance of the SVE system are performed by Drewelow Engineering of Encinitas, California ("Drewelow").

With the exception of planned system testing, SVE system at the Site was operated continuously during this reporting period. The SVE system was shut down on 31 May 2001 to allow static vapor sampling on 14 June 2001. Following the static vapor sampling and rebound testing of the system, the SVE system was restarted on 14 June 2001 and was in operation through the remainder of the reporting period. Excluding this planned shutdown, the SVE system at the Site operated nearly continuously between 1 April 2001 and 20 June 2001.

3.2.2. System Monitoring

The following parameters have been monitored during operation of the SVE system: vapor flow rate from the extraction wells; total vapor flow rate; vacuum (pressure) at the extraction wells and monitoring points; blower influent flow rate and vacuum; blower discharge flow rate, pressure, and temperature; and VOC concentrations in the extracted soil vapor. The water level in the knockout tank is also monitored. During this reporting period, water was observed in the piping of extraction well SVE-2 and the inlet manifold to the system blower.

Approximately 15 gallons of water were removed from the SVE system during this reporting period. Water removed from the SVE system is stored in 55-gallon drums and transported offsite for disposal and/or treatment.

Monitoring data collected at the inlet to the system blower prior to dilution with ambient air are presented in Table 4a and Figure 8a. Monitoring data collected at individual soil vapor extraction wells are presented in Tables 4b through 4h and Figures 8b through 8h. Field monitoring data for the soil vapor monitoring probes are presented in Table 5.

Prior to the planned shut down of the SVE system on 31 May 2001, flow rates in the four shallow zone extraction wells (SVE-1, SVE-2, SVE-3, and VMP-1) ranged from 2.3 to 10 acfm. The flow rates in the three deep zone extraction wells (SVE-D1, VMP-D1, and VMP-D2) ranged from 11 to 17 acfm at the end of the reporting period.

3.3. Soil Vapor Sampling

3.3.1. Vapor Well and System Influent Sampling

On 31 May and 14 June 2001, EKI collected soil vapor samples for laboratory analysis from the undiluted blower influent (i.e., the combined total influent of the SVE wells) and from each of the eight SVE wells and soil vapor monitoring probes at the Site. Duplicate soil vapor samples were collected from the undiluted blower influent on 31 May and 14 June 2001. Vapor extraction was occurring during the sampling event of 31 May 2001, whereas the samples of soil vapor collected on 14 June 2001 were collected under static conditions. The samples were collected in Tedlar bags using a purge/sampling pump connected to a sampling port with Teflon tubing. All samples were labeled with a unique sample identification number, and chain-of-custody forms were initiated at the time of sampling. All samples were analyzed for VOCs by Performance Analytical, Inc. of Simi Valley, California using EPA Method TO-14A. Analytical results for the samples are summarized in Table 6, and copies of the laboratory reports and chain-of-custody forms are provided in Appendix C.

The analytical results for samples of soil vapor collected during system operation are described below. The analytical results for the static vapor sampling event on 14 June 2001 are described in Section 3.4.

Shallow Vadose Zone: During this reporting period, several VOCs were detected at concentrations above method detection limits in soil vapor samples collected from SVE wells SVE-1, SVE-2, SVE-3, and VMP-1, and soil vapor monitoring probe VMP-2. However, the only VOCs detected at concentrations above method detection limits and 1 ppmv were TCE, PCE, and benzene (Table 6). No VOCs were detected above 1 ppmv in the sample of soil vapor collected from vapor monitoring probe VMP-2 on 31 May 2001.

Unlike previous sampling of the SVE system, the concentrations of VOCs detected in the samples of soil vapor collected from the shallow vadose zone extraction wells were similar for each well. During previous sampling events, VOC concentrations detected in samples collected from well SVE-1 were significantly higher than those detected in samples collected from the other shallow wells and probes (see Table 6). During the 31 May 2001 sampling event, the concentration ranges of TCE, PCE, and benzene detected in the samples of soil vapor collected from the shallow vadose zone wells were 5 to 10 ppmv, 1.2 to 3.3 ppmv and 0.83 to 2.4 ppmv, respectively.

The decrease in the VOC concentration gradients between soil vapor at extraction well SVE-1 and the other shallow vadose zone wells can be attributed to the continued decrease in VOC concentrations in soil vapor near well SVE-1. As shown in Table 6, the concentration of TCE detected in samples of soil vapor collected from well SVE-1 decreased 99.9 percent between startup of the SVE system on 16 March 2000 (10,000 ppmv) and the most recent sampling event on 31 May 2001 (7.8 ppmv), and 97 percent between 14 December 2000 (260 ppmv) and 31 May 2001 (see Figure 8b). The concentrations of VOCs detected in samples of soil vapor collected from extraction wells SVE-2 and SVE-3 have also decreased significantly during the course of the system operation (see Figures 8c and 8d). The decrease in VOC concentrations in soil vapor extracted from each of the shallow vadose zone wells to similarly low levels suggests that the SVE system at the Site has effectively remediated the shallow soil zones impacted by releases of VOCs.

Deep Vadose Zone: During this reporting period, several VOCs were detected at concentrations above method detection limits in samples of soil vapor collected from extraction wells SVE-D1, VMP-D1, and VMP-D2. However, the only VOCs detected at concentrations above 1 ppmv were TCE, PCE, and benzene (see Table 6). During the 31 May 2001 sampling event, TCE, PCE, and benzene were detected in the shallow zone wells at maximum concentrations of 11 ppmv, 3.8 ppmv and 2.7 ppmv, respectively. As shown on Figures 8f through 8h, the concentrations of VOCs detected in the samples of soil vapor collected from the deep zone wells have decreased to similarly low concentrations at each well location.

SVE Blower Influent: During this reporting period, several VOCs were detected at concentrations above method detection limits in soil vapor samples collected from the influent to the system blower. However, the only VOCs detected at concentrations above 1 ppmv were TCE, PCE, and benzene (Table 6). Between startup of the SVE system on 16 March 2000 and the system shutdown on 31 May 2001, the total concentration of VOCs detected in samples of blower influent decreased from 940 ppmv to 10 ppmv (i.e., a decrease of about 99 percent). During the most recent three monitoring events with the system operating, the concentrations of TCE, benzene, and PCE detected in samples of blower influent were relatively low (maximum concentrations of 7.0 ppmv, 4.1 ppmv, and 1.8 ppmv, respectively) and did not vary significantly (see Table 6). The decrease in the total concentration of VOCs detected in soil vapor samples collected from the blower influent during operation of the SVE system is illustrated on Figure 8a.

Quality Assurance/Quality Control ("QA/QC"): Standard laboratory QA/QC procedures used for the project included analyses of laboratory duplicates and method blanks. The relative percentage differences ("RPDs") of the laboratory duplicates were within acceptable ranges. No analytes were detected in the method blank samples analyzed for this project. Laboratory QA/QC results are provided with the laboratory reports in Appendix C.

Duplicate soil vapor samples were collected from the undiluted blower influent on 31 May and 14 June 2001 (see Table 6). The RPDs for TCE were 2.9 and 4.4 percent, respectively. These RPDs indicate an acceptable range of sampling and analytical reproducibility.

EKI collected equipment blanks during sampling activities on 31 May and 14 June 2001. The equipment blanks were collected by pumping ambient air into a tedlar bag using the purge/sampling pump, as described above. Concentrations of TCE detected in the equipment blanks ranged from 0.012 to 0.075 ppmv. The concentrations of TCE detected in vapor samples collected from the vapor wells, vapor probes, and blower influent were at least three times greater than the concentrations of TCE detected in the equipment blank samples.

3.3.2. Estimated VOC Removal Rates

Rates of VOC removal were estimated using measured vacuum readings, flow rates, and analytical data (see Tables 4a through 4h). In most cases, mass removal for a given period of time was calculated using an average of the mass removal rates at the beginning and end of the time period. Exceptions to this averaging method are noted in the tables.

Based on measurements made at the blower influent, it is estimated that 155 pounds of VOCs, including 121 pounds of TCE, have been extracted from soil at the Site as of 31 May 2001 (see Table 4a and Figure 9). It is estimated that 22 pounds of VOCs, including 13 pounds of TCE, were extracted from soil at the Site during the period from 14 December 2000 through 31 May 2001. Therefore, only about 14 percent of the cumulative mass removal by the SVE system occurred during the last five months of system operation. Approximately 55 percent of the mass removal during this reporting period occurred in the shallow vadose zone. The average total mass removal rate by the SVE system during this reporting period was approximately 0.21 pounds of VOCs per day. The daily mass removal rates by the SVE system do not appear to have changed significantly during the last nine months of system operation (see Table 4a). Thus, a relatively small, steady removal of VOCs occurred during this reporting period.

3.3.3. Soil Vapor Field Monitoring

Total VOC concentrations in soil vapor samples were also periodically monitored with an organic vapor meter, which utilizes a photoionization detector ("PID") to measure total concentrations of VOCs. The PID does not distinguish between individual compounds, but gives a reading for total VOCs. Samples for PID analyses were collected in Tedlar bags

using the method described in Section 3.3.1. The PID was calibrated with 100 ppmv of isobutylene. PID readings from soil vapor samples collected at the extraction wells and vapor monitoring probes are presented in Tables 4b through 4h and in Table 5. These data are plotted as a function of time on Figures 8b through 8h. The PID readings suggest that total VOC concentrations in the blower influent and each of the vapor wells decreased during this reporting period.

3.3.4. SCAQMD Compliance Monitoring

During this reporting period, the effluent of the treatment system was monitored with a PID on a weekly basis to demonstrate conformance with the limitations of the SCAQMD permit for the system. For treatment system monitoring, the PID was calibrated with 50 ppmv of hexane.

The vapor treatment components of the SVE system at the Site are owned by Drewelow Engineering, and the SCAQMD permit is held by Drewelow. Drewelow reports that effluent concentrations measured by the PID have been within the discharge limitations of the SCAQMD permit throughout the operation of the SVE system.

3.4. Static Vapor Sampling

As discussed in Section 3.2.1, the soil vapor extraction system at the Site was shut down once during this reporting period to allow collection of soil vapor samples from the extraction wells and monitoring probes under static conditions. Chemical analyses of the samples of soil vapor collected under static conditions are used to assess the progress and effectiveness of soil remediation at the Site. The SVE system was shut down on 31 May 2000 for a period of two weeks to allow collection of soil vapor samples. A summary of the TCE concentrations detected in static soil vapor samples collected from each well is presented below (see Table 6 and Figures 8b through 8h).

SVE-1: The concentrations of TCE detected in static vapor samples collected from shallow vadose zone well SVE-1 during the sampling events of 16 March 2000, 6 July 2000, 28 September 2000, 4 January 2001, and 14 June 2001 were 10,000, 3,300, 230, 350, and 11 ppmv, respectively. These data indicate that the concentration of TCE has decreased approximately 99.9 percent after 15 months of system operation.

SVE-2: The concentrations of TCE detected in static vapor samples collected from shallow vadose zone well SVE-2 during the sampling events of 16 March 2000, 6 July 2000, 28 September 2000, 4 January 2001, and 14 June 2001 were 75, 120, 110, 34, and 22 ppmv, respectively. These concentrations indicate a 71 to 82 percent decrease in TCE concentration after 15 months of system operation. Although the laboratory data are inconsistent, mass removal estimates and field monitoring of total VOC concentrations with a hand-held PID suggest that most of the soil remediation at this location occurred during the first six months

of system operation, with less than two pounds of TCE removed during the period from December 2000 through May 2001 (see Table 4c and Figure 8c).

SVE-3: The concentrations of TCE detected in static vapor samples collected from shallow vadose zone well SVE-3 during the sampling events of 16 March 2000, 6 July 2000, 28 September 2000, 4 January 2001, and 14 June 2001 were 25, 7.4, 3.8, 1.4, and 1.6 ppmv, respectively. These data indicate that the concentration of TCE has decreased approximately 94 percent after 15 months of system operation, with less than one pound of TCE removed since December 2000.

VMP-1: The concentrations of TCE detected in static vapor samples collected from shallow vadose zone well VMP-1 during the sampling events of 16 March 2000, 6 July 2000, 28 September 2000, 4 January 2001, and 14 June 2001 are 29, 0.13, 0.47, 0.93, and 0.27 ppmv, respectively. These data indicate that the concentration of TCE has decreased approximately 99 percent after 15 months of system operation, and that the concentration of TCE has not changed significantly at this location during the last 11 months of system operation.

VMP-2: The concentrations of TCE detected in static vapor samples collected from shallow vadose zone well VMP-2 during the sampling events of 16 March 2000, 6 July 2000, 28 September 2000, 4 January 2001, and 14 June 2001 are 43, 5.2, 0.52, 0.13, and 0.23 ppmv, respectively. These data indicate that the concentration of TCE has decreased approximately 99 percent after 15 months of system operation, and that the concentration of TCE has not changed significantly at this location during the last nine months of system operation.

SVE-D1: The concentrations of TCE detected in static vapor samples collected from deep vadose zone well SVE-D1 during the sampling events of 16 March 2000, 6 July 2000, 28 September 2000, 4 January 2001, and 14 June 2001 are 1,000, 92, 120, 41, and 140 ppmv, respectively. These data indicate that the concentration of TCE has decreased approximately 86 percent decrease after 15 months of system operation, and that the concentration of TCE has not changed significantly at this location during the last 11 months of system operation.

VMP-D1: The concentrations of TCE detected in static vapor samples collected from deep vadose zone well VMP-D1 during the sampling events of 16 March 2000, 6 July 2000, 28 September 2000, 4 January 2001, and 14 June 2001 are 460, 9.4, 8.6, 1.6, and 5.7 ppmv, respectively. These data indicate that the concentration of TCE has decreased approximately 99 percent after 15 months of system operation, and that the concentration of TCE has not changed significantly at this location during the last nine months of system operation.

VMP-D2: The concentrations of TCE detected in static vapor samples collected from deep vadose zone well VMP-D2 during the sampling events of 16 March 2000, 6 July 2000, 28 September 2000, 4 January 2001, and 14 June 2001 are 39, 5.7, 9.3, 3.0, and 5.4 ppmv, respectively. These data indicate that the concentration of TCE has decreased approximately

86 percent after 15 months of system operation, and that the concentration of TCE did not change significantly at this location during the last 11 months of system operation.

3.5. Request for Closure of Soil Remediation Activities at the Site

In a previous progress report for the Site (EKI, 5 February 2001), it was concluded that the SVE system at the Site had achieved appropriate conditions for closure of soil remediation activities at the Site. As presented in this progress report, continued monitoring of the SVE system from December 2000 through June 2001 has provided additional data indicating that sufficient remediation of VOCs in soil at the Site has occurred to proceed with confirmation sampling and closure of the SVE system.

The data presented above in Sections 3.3 and 3.4 indicate that substantial remediation of vadose zone soil has occurred during operation of the SVE system at the Site, and that the concentrations of VOCs in soil gas beneath the Site have stabilized at low levels relative to the concentrations measured at the time of system startup. As shown on Figures 8a through 8h, the total concentrations of VOCs in the system blower influent and in the soil vapor extraction and monitoring wells at the Site have decreased asymptotically. The total VOC concentration asymptotes for the system blower influent and the soil vapor extraction and monitoring wells are about 80 to 99 percent lower than the concentrations measured at the time of system startup in March 2000. As discussed above in Section 3.3, the VOC concentration gradients have dissipated in the shallow vadose zone, and roughly equal amounts of VOCs are currently being extracted from the shallow and deep vadose zones. In addition, mass removal estimates and field monitoring data for the SVE system suggest that over 85 percent of the soil remediation occurred during the first nine months of system operation. These data indicate that the concentrations of VOCs in soil gas beneath the Site are not likely to decrease significantly with continued operation of the SVE system.

As shown in Figure 9 and Table 4a, the rate of VOC mass removal by the SVE system at the Site also has decreased to a low, stable value. Based on measurements made at the blower inlet, it is estimated that 22 pounds of VOCs, including 13 pounds of TCE, were extracted from soil at the Site during the last five months of system operation. This represents only about 14 percent of the cumulative mass removal by the SVE system. The average mass removal rates during the last nine months of system operation were approximately 80 percent lower than the mass removal rates during the initial six months of system operation. Moreover, the daily mass removal rates by the SVE system do not appear to have changed significantly during the last nine months of system operation. Thus, the rate of VOC mass removal by the SVE system has reached a low and stable level that does not warrant additional soil vapor extraction at the Site.

The data presented above indicate the SVE system at the Site has achieved appropriate conditions for closure of soil remediation activities at the Site. At this time, Webb intends to

proceed with confirmation sampling of soil and closure of the SVE system at the Site upon RWQCB approval of the work plan describing the proposed soil closure activities.

4. SUMMARY

Gauging of the depth to the groundwater table was performed at the groundwater monitoring wells at the Site on 24 April and 5 June 2001. On the basis of these measurements, the predominant direction of groundwater flow appears to be toward the south-southeast under both the Webb and Reliable Steel properties. This estimated direction of groundwater flow is consistent with previous groundwater monitoring at the Site.

The only VOCs detected in the samples of groundwater collected at the Site on 5 June 2001 were TCE, c-1,2-DCE, and PCE. Consistent with previous results, TCE was the chemical of concern detected with the greatest frequency (five of six samples) and at the highest concentration (31,000 ug/L in well MW-1). The concentrations of TCE, c-1,2-DCE, and PCE detected in samples of the groundwater collected at the Site during June 2001 were within the ranges of concentrations detected during previous monitoring at the Site. No VOCs were detected in the sample of groundwater collected from downgradient monitoring well MW-4.

As requested by the RWQCB in its meeting with Webb on 8 February 2001, the samples of groundwater collected at the Site during June 2001 were analyzed for CCR metals. Arsenic (0.027 to 0.32 mg/L), barium (0.030 to 0.32 mg/L), molybdenum (<0.05 to 0.95 mg/L), and zinc (0.016 to 0.024 ug/L) were the only metals detected in the samples of groundwater collected at the Site on 5 June 2001. No other metals, including chromium, were detected in the samples of groundwater collected from the monitoring wells at the Site.

The data presented in this progress report indicate that substantial remediation of vadose zone soil has occurred during operation of the SVE system at the Site, and that the concentrations of VOCs in soil gas beneath the Site have stabilized at low levels relative to the concentrations measured at the time of system startup. The total concentrations of VOCs in the system blower influent and in the soil vapor extraction and monitoring wells at the Site have decreased asymptotically. The total VOC concentration asymptotes for the system blower influent and the soil vapor extraction and monitoring wells are about 80 to 99 percent lower than the concentrations measured at the time of system startup in March 2000. The VOC concentration gradients have dissipated in the shallow vadose zone, and roughly equal amounts of VOCs are currently being extracted from the shallow and deep vadose zones. In addition, mass removal estimates and field monitoring data for the SVE system suggest that over 85 percent of the soil remediation occurred during the first nine months of system operation. These data indicate that the concentrations of VOCs in soil gas beneath the Site are not likely to decrease significantly with continued operation of the SVE system.

The rate of VOC mass removal by the SVE system at the Site also has decreased to a low, stable value. Based on measurements made at the blower inlet, it is estimated that 22 pounds

of VOCs, including 13 pounds of TCE, were extracted from soil at the Site during the last five months of system operation. This represents only about 14 percent of the cumulative mass removal by the SVE system. The average mass removal rates during the last nine months of system operation were approximately 80 percent lower than the mass removal rates during the initial six months of system operation. Moreover, the daily mass removal rates by the SVE system do not appear to have changed significantly during the last nine months of system operation. Thus, the rate of VOC mass removal by the SVE system has reached a low and stable level that does not warrant additional soil vapor extraction at the Site.

The data presented in this progress report indicate the SVE system at the Site has achieved appropriate conditions for closure of soil remediation activities at the Site. At this time, Webb intends to proceed with confirmation sampling of soil and closure of the SVE system at the Site upon RWQCB approval of the work plan describing the proposed soil closure activities.

5. REFERENCES AND PREVIOUS REPORTS

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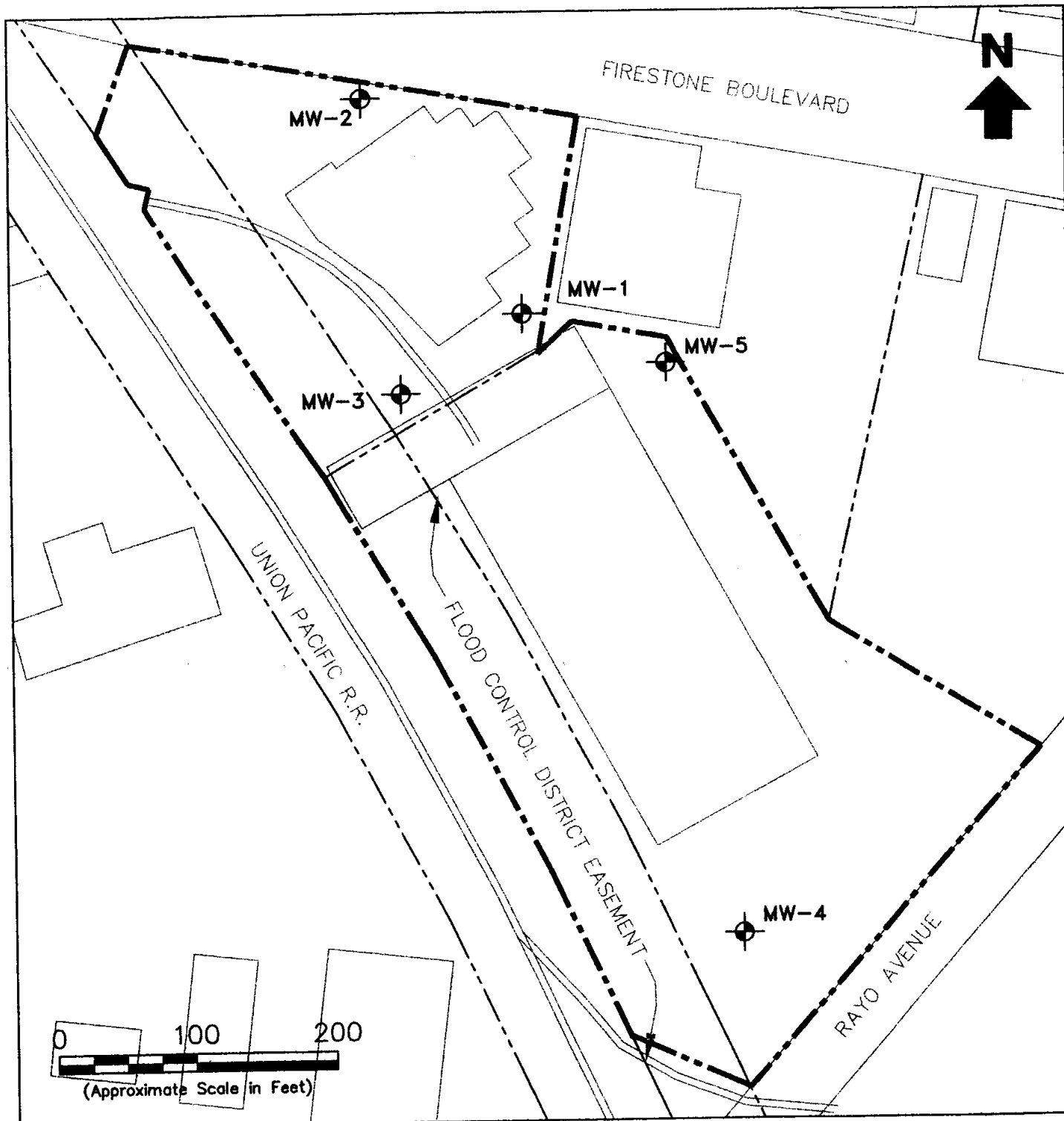
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LEGEND

-  Groundwater Monitoring Well
-  Property Line/Site Boundary

**Erler &
Kalinowski, Inc.**

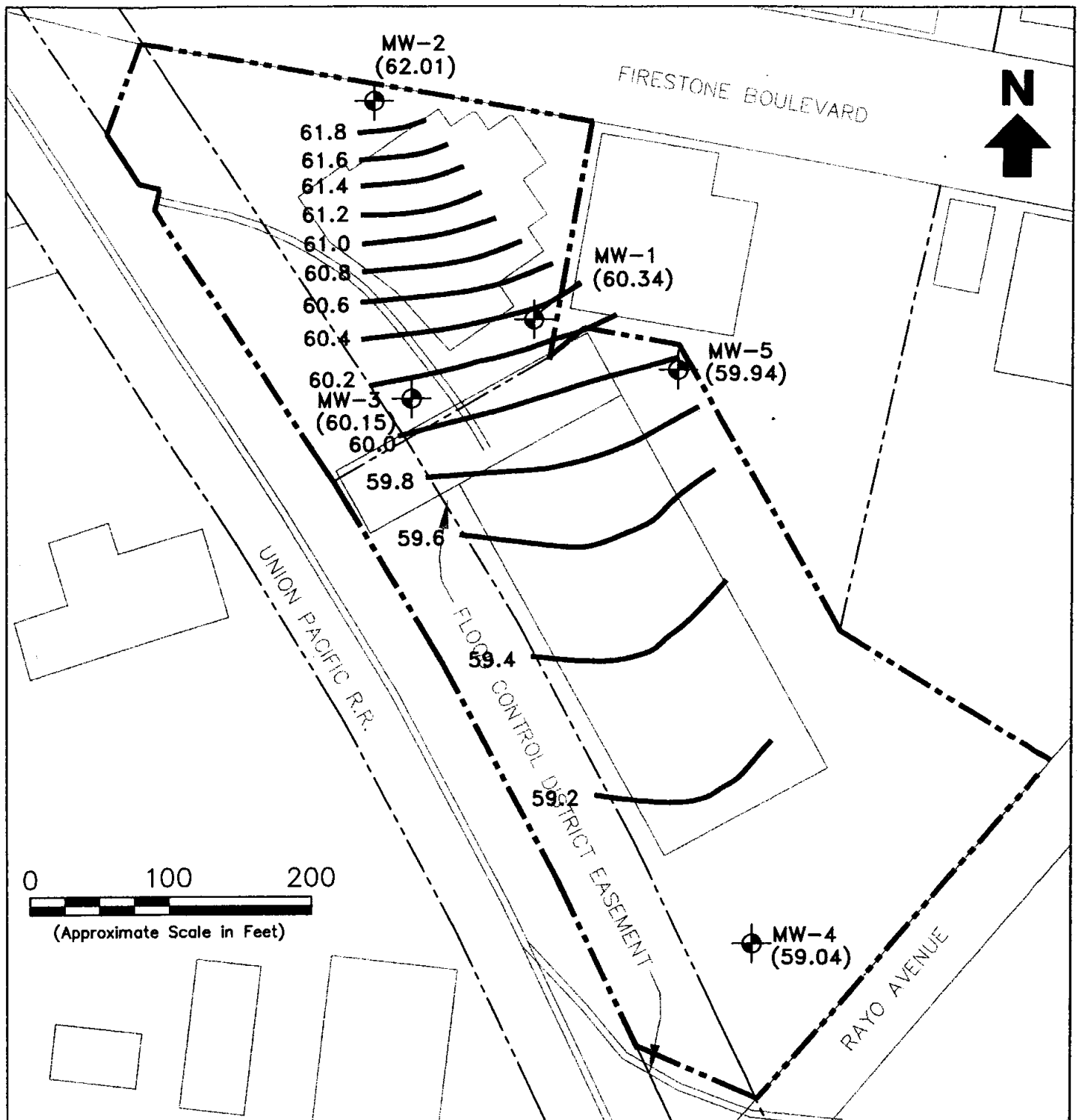
Groundwater Monitoring
Well Locations

Jervis B. Webb Company of California
South Gate, California
July 2001
EKI 991103.01

Notes:

1. All locations are approximate.

Figure 2



LEGEND

- 62.0 — Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)
- MW-3 (60.15) Groundwater Monitoring Well with Groundwater Elevation (msl)
- Property Line/Site Boundary

Notes:

1. All locations are approximate.
2. NR = Not Recorded

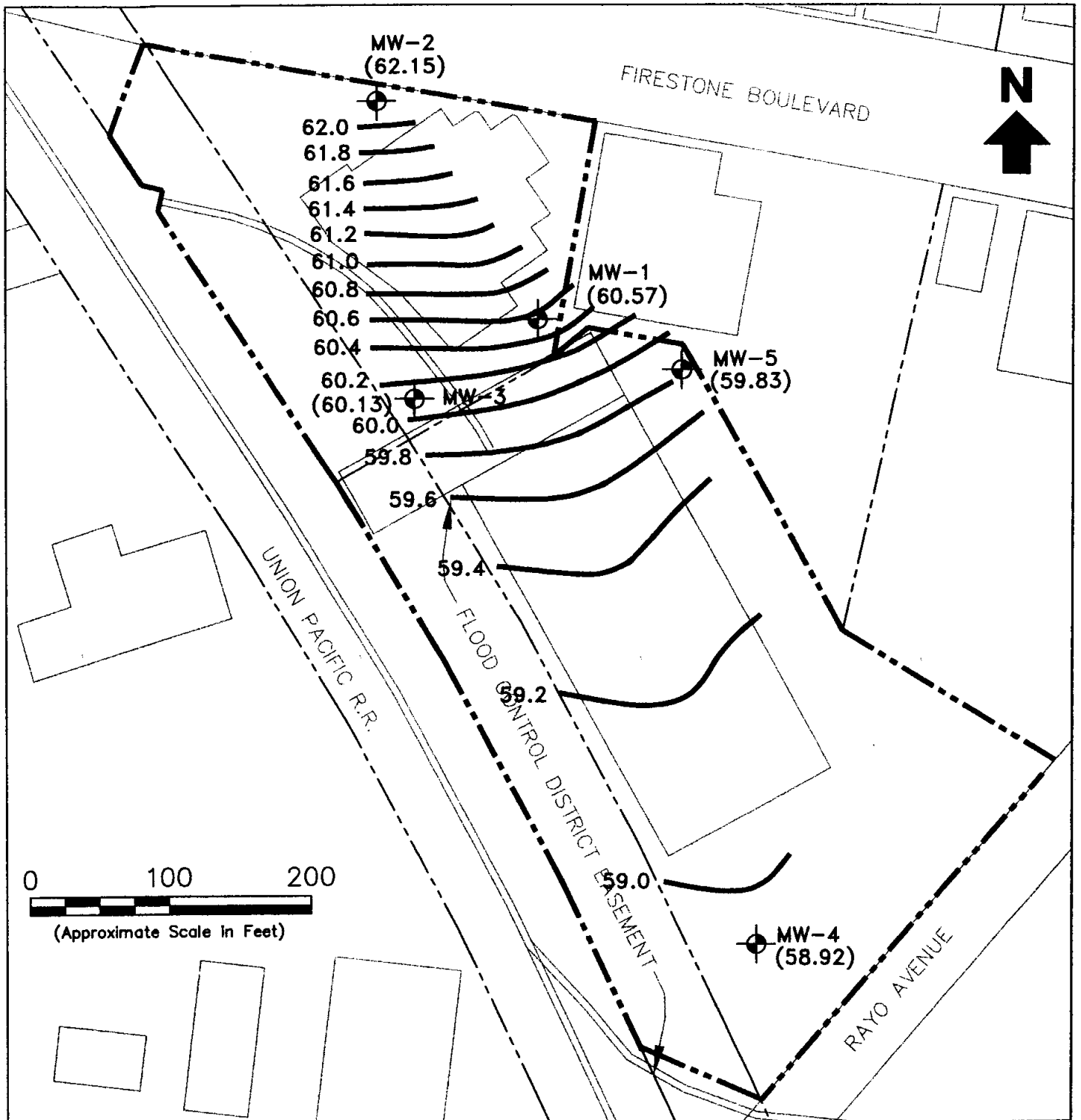
Erler & Kallnowski, Inc.

Elevation of the Groundwater Table on 24 April 2001

Jervis B. Webb Company of California
South Gate, California

July 2001
EKI 991103.01

Figure 3



LEGEND

- Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)
- Groundwater Monitoring Well with Groundwater Elevation (msl)
- Property Line/Site Boundary

Notes:

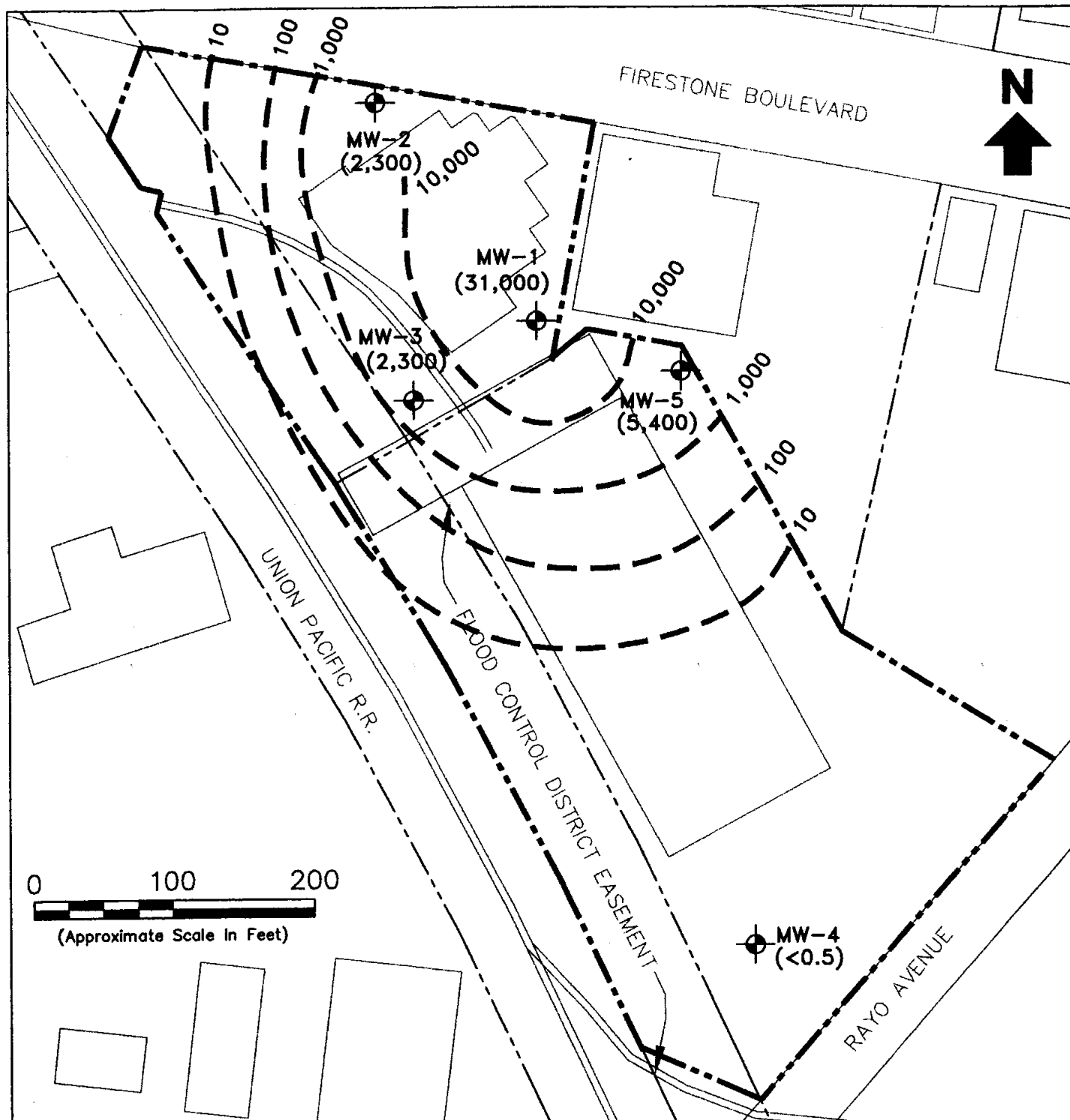
1. All locations are approximate.
2. NR = Not Recorded

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 5 June 2001

Jervis B. Webb Company of California
 South Gate, California
 July 2001
 EKI 991103.01

Figure 4



LEGEND

- Isoconcentration Contour for Trichloroethene (Micrograms per Liter)
- MW-3 Groundwater Monitoring Well
- Property Line/Site Boundary

Notes:

1. All locations are approximate.
2. Concentrations shown in units of micrograms per liter.

**Erler &
Kallnowski, Inc.**

**Concentrations of Trichloroethene
Detected in Groundwater Samples**

Jervis B. Webb Company of California
South Gate, California
July 2001
EKI 991103.01

Figure 5

